DOCUMENT RESUME

ED 447 238 UD 033 858

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TITLE	Four Models of School Improvement: Successes and Challenges in Reforming Low-Performing, High-Poverty Title I Schools. Report No. 48.
INSTITUTION	Center for Research on the Education of Students Placed At Risk, Baltimore, MD.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE	2000-09-00
NOTE	81p.
CONTRACT	R-117-D40005
AVAILABLE FROM	For full text: www.csos.jhu.edu.
PUB TYPE	Reports - Evaluative (142) -- Tests/Questionnaires (160)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Case Studies; *Compensatory Education; Disadvantaged Youth; *Educational Improvement; Elementary Secondary Education; *Models; Poverty; Urban Schools
IDENTIFIERS	*Elementary Secondary Education Act Title I; *Reform Efforts; Roots and Wings Program; Success for All Program

ABSTRACT

In this comprehensive report, four distinct processes for reforming nine low-performing Title I schools in challenging high-poverty contexts are examined. These processes include: (1) a fundamentally grassroots, site-based model of reform; (2) locally mandated school reconstitution; (3) implementation of a proven national reform model, Success for All/Roots & Wings; and (4) implementation of locally administered reform package of Direct Instruction and Core Knowledge. Qualitative case studies of implementation and teaching and learning are presented along with quantitative outcomes in the areas of student achievement and classroom instruction. Findings show that at least one school engaged in each of the four processes showed improvement in several areas, while the others remained stagnant or declined. The potential strengths and weaknesses of each of these popular methods for reforming high poverty schools are discussed. An appendix contains the classroom observation form used in the case studies. (Contains 13 tables and 27 references.) (Author/SLD)

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CRESPAR

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FOUR MODELS OF SCHOOL IMPROVEMENT

Successes and Challenges in Reforming Low-Performing, High-Poverty Title I Schools

Geoffrey D. Borman
Laura Rachuba
Amanda Datnow
Marty Alberg
Martha Mac Iver
Sam Stringfield
Steve Ross

Report No. 48 / September 2000

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CENTER FOR RESEARCH ON THE EDUCATION OF STUDENTS PLACED AT RISK

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Johns Hopkins University and University of Memphis

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Published by the Center for Research on the Education of Students Placed At Risk, supported as a national research and development center by the Office of Educational Research and Improvement (OERI), U.S. Department of Education (R-117-D40005). The opinions expressed in this publication do not necessarily reflect the policy or position of OERI, and no official endorsement should be inferred. An on-line version of this report is available at our web site: www.csos.jhu.edu.

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Every child has the capacity to succeed in school and in life. Yet far too many children, especially those from poor and minority families, are placed at risk by school practices that are based on a sorting paradigm in which some students receive high-expectations instruction while the rest are relegated to lower quality education and lower quality futures. The sorting perspective must be replaced by a "talent development" model that asserts that all children are capable of succeeding in a rich and demanding curriculum with appropriate assistance and support.

The mission of the Center for Research on the Education of Students Placed At Risk (CRESPAR) is to conduct the research, development, evaluation, and dissemination needed to transform schooling for students placed at risk. The work of the Center is guided by three central themes — ensuring the success of all students at key development points, building on students' personal and cultural assets, and scaling up effective programs — and conducted through research and development programs in the areas of early and elementary studies; middle and high school studies; school, family, and community partnerships; and systemic supports for school reform, as well as a program of institutional activities.

CRESPAR is organized as a partnership of Johns Hopkins University and Howard University, and supported by the National Institute on the Education of At-Risk Students (At-Risk Institute), one of five institutes created by the Educational Research, Development, Dissemination and Improvement Act of 1994 and located within the Office of Educational Research and Improvement (OERI) at the U.S. Department of Education. The At-Risk Institute supports a range of research and development activities designed to improve the education of students at risk of educational failure because of limited English proficiency, poverty, race, geographic location, or economic disadvantage.

ABSTRACT

In this comprehensive report, the authors examine four distinct processes for reforming nine low-performing Title I schools in challenging high-poverty contexts. These processes include (1) a fundamentally grassroots, site-based model of reform; (2) locally mandated school reconstitution; (3) implementation of a proven, national reform model, Success for All/Roots & Wings; and (4) implementation of a locally administered reform package of Direct Instruction and Core Knowledge.

Qualitative case studies of implementation and teaching and learning are presented along with quantitative outcomes in the areas of student achievement and classroom instruction. Findings show that at least one school engaged in each of the four processes showed improvement in several areas, while the others remained stagnant or declined. The potential strengths and weaknesses of each of these popular methods for reforming high-poverty schools are discussed.

ACKNOWLEDGMENTS

The authors would like to thank the principals and teachers of the schools described in the case studies in this report.

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Appendix A.1

INTRODUCTION

The 1994 federal Title I law, the Improving America's Schools Act, called on states to raise academic standards, to develop challenging new assessments, to ensure accountability for results, to build the capacities of teachers and schools for improvement, and to develop coordinated, systemic reforms. This new law challenged state and local education systems to change their incompatible policies and objectives in coherent and coordinated ways to produce improved educational processes and outcomes (Orland, 1994). In response, policymakers and educators from nearly every state have begun the process of transforming Title I from a supplemental remedial program to an integral component of standards-based reform (Borman, in press).

The infrastructure for standards-based reform is typically composed of challenging academic content standards, performance standards for all students, a compatible assessment system, and a system that punishes and rewards schools for their results. The processes for assisting schools whose results do not meet standards, though, vary from state to state and from district to district. According to a recent report by the U.S. Department of Education (1998), 23 states have policies for intervening and mandating major changes in chronically low-performing schools — from helping "redesign" schools to, as a last resort, reconstituting failing schools. Whatever the process, these efforts generally have the goals of (a) improving students' academic outcomes; and (b) encouraging high-quality, standards-based classroom instruction aimed at developing higher-order performances and cognitive skills.

In this report, we examine four distinct processes for turning around low-performing Title I schools in challenging, high-poverty contexts. These processes range from a fundamentally grassroots, site-based model of reform, to closing down low-performing schools and reopening them with new school leaders, teachers, and staff. Between these two extremes, we look at the experiences of schools partnering with national or local school improvement teams. In one example, we study schools adopting the proven, national reform model Success for All/Roots & Wings. In the other example, we examine a partnership between two schools and a locally developed school improvement team. Taken together, the case studies of these four models of school improvement provide useful information regarding the potential strengths and weaknesses of a variety of the most popular methods for reforming high-poverty schools.

In addition to describing the four distinct processes of school improvement, we provide summaries of the promising features of each of them. We conclude by discussing the overall performance of each model and by assessing each school improvement process according to three standards. Two of the three standards relate to the goals of standards-based

reform mentioned above. Specifically, does the school improvement model foster improvements in students' academic outcomes and in teachers' implementation of high-quality, standards-based classroom instruction aimed at developing higher-order performances and cognitive skills? The third standard asks whether the reform model develops and improves the professional lives and capacities of teachers. Using these three standards, we discuss the contributions and limitations of each of the processes of school improvement.

Overview of the Study

This study was conducted by researchers at the Center for Social Organization of Schools at Johns Hopkins University and the College of Education at the University of Memphis. The goal of the study was to understand the processes, and determine some of the effects of, various schoolwide improvement efforts in high-poverty contexts. Each of the four sites in our study was selected because it represented a leading national example of one of the four school improvement models. We studied locally mandated reconstitution in a West Coast school district, grassroots site-based school improvement in a Midwestern district, implementation of a nationally recognized whole school reform model in a Southern district, and a partnership with a local external partner in an East Coast district. The identities of the school districts, and of the states in which the districts reside, are not disclosed in this report. We refer to the schools, principals, teachers, and other school staff in this study by pseudonyms. The major research questions of the study were:

- How did each method impact (a) student achievement; (b) opportunities for teachers' professional growth; and (c) teachers' delivery of authentic instruction aimed at developing students' higher-order performances and cognitive skills?
- What are the potential benefits and drawbacks of each of the four methods of school improvement?
- What common factors from across the four diverse school improvement models were important in shaping the success of reform?

In order to answer these questions, we conducted a study of nine schools in four school districts. Each of the four districts identified schools that were in the process of school improvement in response to a history of chronic low performance. All nine schools were located in urban areas and served a majority population of students eligible for the federal free or reduced-price lunch program.

We used a mixed-method, qualitative and quantitative research design. We began the study during the 1996-1997 school year (Year 1) with the Southern and East Coast sites. We

began following the progress of the West Coast and Midwest schools during the 1997-1998 school year (Year 2). We followed the progress of all schools through the spring of the 1998-1999 academic year (Year 3).

Qualitative Component

The qualitative component of this study involved conducting comparative case studies of the nine school improvement schools (Yin, 1989). In conducting these case studies, our research team visited each school two times over the three-year period. A two-person team conducted most site visits. This involved one-day visits during Years 1 and 2 in the Southern and East Coast schools, and during Years 2 and 3 in the Midwest and West Coast schools.

Interviews. During our site visits, we used semi-structured protocols to conduct interviews and focus groups with school staff to determine the success and challenges they experienced in their improvement efforts (Krueger, 1994). We interviewed principals twice in all but the Southern schools where principals were interviewed once. We also interviewed teachers, either individually or in a focus group, at each school. New interview protocols were developed for each round of data collection. Most interviews were taped and transcribed verbatim. During our first visit to the West Coast schools, neither the principal nor the teachers at Booker T. Washington agreed to be tape-recorded.

Classroom Observations. Our study involved observing a sampling of classrooms from each grade level. Each observation lasted about 45 minutes. In addition to recording qualitative running notes, we recorded the percent of students in the classroom on task at approximately eight-minute intervals. The main focus of the observations was the extent to which the teacher utilized authentic instruction techniques focusing on students' acquisition of higher-order thinking skills. This outcome was measured using a structured observation form, which was based on an instrument developed by D'Agostino (1996) and on the work of Newmann and Wehlage (1993). Drawing on the Bloom's taxonomy of educational objectives for the cognitive domain (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956) the observation form also included a section asking classroom observers to indicate whether the lesson emphasized basic skills, such as recalling information, or higher-order skills, such as interpreting or showing understanding of facts, breaking down complex information or ideas, creating completely new products, or making value judgments against some criterion or standard. Observers also noted the occurrence of student discussion, the amount of student engagement, and the level of social support in the classroom both among students and between teacher and students. Observers completed ratings of the degree of emphasis placed on authentic instruction at the conclusion of each classroom observation. The ratings were noted on the Authentic Instruction Classroom Observation Form, which appears in the Appendix.

Qualitative Data Synthesis. We triangulated data from interviews with principals, and from classroom observations and teacher focus groups, in order to help establish the reliability of our findings. Qualitative data analysis and synthesis was ongoing throughout the study and involved summarizing transcripts, coding observation data, and developing individual case reports. The final report relies on a synthesis of findings from a diverse set of qualitative and quantitative data sources.

Quantitative Component

The quantitative component of this study was based on measures of (a) a five-item scale of the level of authentic instruction observed in the school, (b) average percent of students on task, and (c) annual school-level achievement data for reading and math.

Level of authentic instruction was based on an 11-item scale that assessed the following: coherence of material, connection of material to students' out-of-school experiences, student discussion, social support, student engagement, and the level of emphasis placed on the six educational objectives outlined by Bloom et al. (1956). Responses to the 11 items ranged from 0 "not evident" or "no emphasis" to 3 "very evident" or "major emphasis." The items were standardized and a mean of the 11 items was computed. The measure had a high degree of internal consistency, as Cronbach's alpha was computed as α=0.82. Percent of students on task was computed as the average of the percent of students on task.

Achievement data were obtained for the year prior to the school's implementation of its improvement process, which served as the baseline, up until the most recent testing cycle (the spring of 1998 or 1999). In most cases, yearly cross-sectional data for the third, fourth, and fifth grades were obtained. For the West Coast district, the Comprehensive Test of Basic Skills, Fourth Edition (CTBS/4) was administered from the 1994-1995 school year until the 1997-1998 school year. Data from the Stanford Achievement Test, Ninth Edition (SAT 9) was administered during the 1998-1999 school year. In the Midwest site, the Iowa Test of Basic Skills was given from the 1995-1996 school year until the 1998-1999 school year. In the Southern district, the CTBS/4 was administered from the 1994-1995 school year until the 1996-1997 school year, and the Comprehensive Test of Basic Skills, Fifth Edition (CTBS/5) was given during the spring of 1998. In the East Coast site, the CTBS/4 was given in the spring of 1998 and 1999. In our East Coast site, the district did no testing during the pretest year. However, baseline CTBS/4 data from the fall of 1996 were available from an ongoing study of second grade students. During the 1998-1999 school year, CTBS/4 data were available from the East Coast site's district-wide testing program.

A Framework for Understanding the Outcomes of School Improvement Efforts

In this era of increased accountability in education, test scores typically determine the "thumbs-up or thumbs-down verdict" on a reform (Cuban, 1998, p. 471). In addition to test scores, though, Cuban argues that when researchers attempt to measure the success of a reform they should also look at other standards. Most importantly, Cuban points to the "adaptability" of the reform model, or its ability to foster "improvements in practice." An adaptable reform allows for inventiveness and active problem solving among teachers as they use the reform to improve their practices and to change the values, attitudes, and behavior of students on both academic and nonacademic tasks.

Like Cuban (1998), we believe that a framework for understanding the success or failure of school improvement efforts includes several perspectives and standards. Our first standard for judging the success of school improvement is that students should grow academically. In this report we consider academic growth in terms of standardized test outcomes, but we also look at qualitative and quantitative measures of how learning environments changed as a result of the reform efforts.

We measured students' educational outcomes and opportunities in several ways. First, we collected school-level reading and math achievement scores from the beginning of each school's improvement efforts to the spring of 1998 or 1999. Second, through our observations, we assessed classroom environments in terms of both how engaging they were and the extent to which they provided opportunities for authentic learning. We quantified student engagement as the percent of students in each classroom who we observed as on task and engaged in the classroom activities at each of the two observation points. We measured students' exposure to authentic instruction during our classroom observations at each of the two observation points.

Our framework also considers the interests of those responsible for implementing reforms by teachers and whether the change served their interests. As Cuban implied, adaptability of a reform by teachers is linked to both the short-term and long-term implementation and effectiveness of the change effort. Thus, in addition to evaluating effects on student outcomes, our framework addresses the reform's potential to foster professional growth and improvements in practice among teachers.

We assessed the adaptiveness of each school improvement model through our interviews with teachers and principals and through our observations of classroom and school activities. Specifically, we evaluated the role of each reform model in improving collegiality among staff, encouraging inventiveness and active problem solving among teachers, improving instructional practices, providing formal and informal professional development opportunities, and promoting the professional standing of teachers.

THE GRASSROOTS SITE-BASED REFORM MODEL

The Context

Reform in this urban, Midwestern school system traditionally has been viewed as a decentralized, grassroots process. More recently, though, a contrasting movement toward centralization of some decision-making processes has played an important role in the operation and financing of the school system. The initial reforms in 1988 called for an expansion of local participation of parents, community members, and school professionals to initiate systemwide change. Each school was required to elect a Local School Council (LSC) with a majority representation of parents and community members. The LSCs were given strong powers to hire and fire the principal and to approve the budget and a School Improvement Plan. The goal of the 1988 reform act was to shift major authority to the schools with the hope that the increased local activism would lead to such things as stronger school leadership, more parent and community involvement, and improved facilities.

By the seventh year of the reform, the mayor, state policy makers, and various groups of stakeholders were increasingly frustrated with the decentralization experiment. Dissatisfaction with the 1988 reform came from different sources. First, students continued to perform poorly on standardized achievement tests during the seven years of parental empowerment. Second, the main goal of increased parental involvement in school affairs was not produced by the LSC. Third, due to a budgetary crisis involving a $150 million deficit, parents and the public were uncertain if schools would open on time in September of 1995. With this crisis, questionable appointments to key school system positions, and a general lack of public confidence in the system, the school board and its top administration came under increasing criticism by the mayor. However, because the mayor's powers over school board appointments were substantially constrained by the nomination commission that the 1988 legislation created, he felt frustrated in his attempts to solve these financial and management problems.

In 1995, the Republican-controlled state legislature, with the support of the mayor, the business community, and the governor, passed legislature that changed the governance arrangements of the 1988 reform act. The School Board Nominating Commission and the School Finance Authority were eliminated under the 1995 law. The new legislation specified a new authority structure, with five head positions and a Chief Executive Officer (CEO). This structure enhanced the power of the board and the CEO, and transferred considerable authority from the LSCs to the central office. The LSCs no longer had complete independence, and certain LSCs that were deemed nonfunctional were disbanded or suspended.

Under the expanded financial powers extended to the board, a number of funded programs (including Substance Abuse Prevention, Hispanic Programs, and Gifted Education) and categorical funds were collapsed into a general education block grant and an educational services block grant, respectively. To further enhance business support for the schools, the new administration reorganized the central office according to business principles stressing downsizing and privatization. Within one year of implementing the new system, the size of the central administration declined by almost 21% with the majority of the cuts coming from citywide administration and services. A number of contracts were awarded to private providers for food services, distribution, and facilities. Policies such as these eliminated the substantial deficit, and began freeing funds for much needed capital improvements across the city schools. In the two schools in our study, the decentralized grassroots reform efforts and the capital improvements made possible by the recent centralized reform efforts were both evident.

Previous Research on the Effects of Grassroots Site-Based Reform

Allowing schools greater grassroots decision-making authority, commonly referred to as site-based management, has become a widespread reform initiative (Leithwood & Menzies, 1998). According to Murphy and Beck (1995), site-based management may take on at least three different forms distinguished by where the locus of power lies (a) with administrators, (b) with school professionals, or (c) with community members. Site-based management powered by administrative control typically focuses on increasing accountability to the central district for expenditure of resources. Proponents of administrative control believe that administrative authority over budgets, personnel, and curriculum, in conjunction with the incentive to make the best use of resources, will result in more resources that directly serve students (Leithwood & Menzies, 1998). Site-based reforms that are driven by professional control grant teachers more decision-making authority in areas such as budgets, curriculum, and personnel. The assumption underlying this site-based management form is that those who work closest with students have the most relevant knowledge for making such decisions (Hess, 1991). Community control, which provides parents and community members greater voice in the management of the school, is based on the assumption that the curriculum ought to reflect the values and preferences of parents and of the local community.

Based on 76 empirical studies, Leithwood and Menzies (in press) report that administrative control seems to result in the least amount of school change. Community control, on the other hand, may result in the most school change. However, there is little evidence to suggest that this form of site-based management will result in improved student growth. Further, community control tends to require significant accommodations by teachers. Professional control appears to have more positive effects on teacher practices than either administrative or community control. Since teacher practices directly impact students,

professional control appears to result in the most student growth of the three site-based management models. Of course, this model also shows the greatest potential to enhance the professional status of teachers.

The Case Studies

Two Midwestern schools instituting grassroots site-based reform efforts were included in this study. These schools were identified by the district Title I coordinator as schools undergoing improvement efforts. However, after our initial site visit, it became clear that both of these schools had begun the process of improvement several years previously. In both schools, efforts to improve instruction and learning resulted from the principal's vision and educational philosophy. The principals at Sojourner Truth Elementary and Jefferson Academy took very different approaches resulting in large differences in school improvement. At Sojourner Truth, we observed site-based management through professional control. At Thomas Jefferson Academy, site-based management was carried out primarily through administrative control. The general characteristics of both schools are summarized in Table 1.

Table 1
Characteristics of Grassroots Site-Based Reform Schools

School	Enrollment	Free-Lunch Eligibility	Racial/Ethnic Composition
Sojourner Truth (Based on 1996/1997 data)	726	95%	92% Latino 7% African American 2% White 0.1% Asian
Thomas Jefferson Community Academy (Based on 1996/1997 data)	944	96%	100% African American

Sojourner Truth Elementary

Description of School

Sojourner Truth Elementary is a kindergarten-through-eighth-grade school that serves a predominantly Hispanic student population in this urban community. Students come from the local community. Two buildings serve the students at Sojourner Truth. Pre-kindergarten and primary-grade students attend classes in an attractive new building that was completed during the 1997-1998 school year and the older students attend classes within the original school building. With the expanded capacity of Sojourner Truth, the school's enrollment doubled.

The principal, who came to Sojourner Truth Elementary in the fall of 1991, expressed a holistic philosophy for educating children and a respect for the high ability of her teachers. Instead of directing her teachers as to how to teach, she selected a group of teachers that shared her vision for educating low-income, minority students. As a result of the improvements made since the principal's arrival in 1991, Sojourner Truth Elementary was recognized for its work in bilingual education. During the spring of the1997-1998 school year, President Clinton visited to acknowledge Sojourner Truth Elementary's achievements.

How Grassroots Site-Based Reform Was Implemented

The principal and faculty at Sojourner Truth Elementary approached school improvement by meeting the needs of students and their families, by building relationships with community organizations and outreach programs, and by supporting the professional development of teachers. The curriculum was described as a combination of basic skills and advanced skills/authentic instruction. According to the principal, teachers used a combination of phonics and whole language. Individual teachers had individual styles — some were very creative, some were more basic. While teachers were encouraged to use their teacher manuals so that the skills from grade to grade built progressively, they were allowed to use whatever practices they felt would be most effective.

To better meet the needs of the school families, a needs assessment was performed each year and then the needs that surfaced were addressed. The staff implemented a number of programs to improve learning and the general well-being of students. An "interventionist" made sure that students regularly attended school and that all of their learning concerns were addressed. Thirty-four students were referred during the 1997-1998 school year for evaluation. The process involved the student, the parents, and an intervention assistance team, and focused on students' health, vision, hearing, and the social and academic aspects — so it takes the whole child and everything that helps them learn.

Attendance continued to be a challenge. Many Mexican-American parents would take their children out of school in the middle of the year to go to Mexico or to help at home in caring for younger siblings. The interventionist tried to help parents see that they were doing their children a disservice by keeping them out of school and felt that there had been a shift in the past few years in the parents' perception of the importance of school. "There is some thought before a family takes a child to Mexico — people were taking their kids out to help them, to translate, to sell peanuts on the street. So we have gone from that to more serious reasons for taking children out."

One of the hallmarks of Sojourner Truth Elementary was the amount of community resources the principal and teachers had helped make available to the school. The social

worker and interventionist had successfully involved community agencies and linked students and their families to the resources offered by these agencies. For example, Sears donated over 150 new coats to Sojourner Truth Elementary students during the winter of 1998. If a student needed glasses but the family could not afford them, the social worker was able to obtain donated eyeglasses. The social worker reported that a number of agencies sent people to give presentations to the parents at no cost. According to the social worker, many agencies that were invited to present found the experience at Sojourner Truth Elementary so positive that they called the school in subsequent years and volunteered to return. In addition to Sojourner Truth Elementary's financial resources and its links to community agencies, the staff members themselves served as resources for parents. Both the social worker and the interventionist spoke of assisting parents who were not fluent in English with various things such as completing forms or accessing the health care system.

At Sojourner Truth, parent involvement was fostered by building relationships between parents and the staff. Teachers commented that they were expected to have regular contact with their students' parents. As one teacher stated, "When I first met [the principal], one of the first questions I remember her asking me was, 'What do you think about calling parents at home?' And that very clearly set the expectation of not just a parent speaking out to the school, but the school reaching out to its parents." One example of involving parents is the after-school lab for teachers. Parents were invited to work with teachers and the teachers stated that, through this collaboration, they had developed a greater appreciation for the skills and talents the parents brought to the school.

Teacher Buy-in. The principal attributed part of their success to the hiring of good teachers who shared her philosophy of education. Hiring was done through a committee-review process, which involved teachers in the actual interviews of teaching candidates. This practice placed value on the perspectives and opinions of current teachers and showed the teaching candidates that they would be working as part of a team. One teacher described the principal's hiring criteria as follows: "I think when she is hiring staff, I think she's looking for people who are willing to work hard and will not take, you know, excuses — 'these children are below the poverty line,' or 'these children, you know, English is not their first language' so I'm not going to be able to teach them as well." Another teacher stated, "I think expectations are set pretty clear from the beginning." Basically, the principal did not hire teachers who had low expectations for low-income students.

Professional Development/Training. Every teacher was encouraged to attend at least one professional conference of his/her choice. Teachers were then expected to report back to the staff what was learned at the conference. In addition, regular staff development days provided presentations on topics that the teachers selected. The topics were chosen based on

surveys about what the teachers wanted to learn. Most teachers also were in school continuing their education. Leading by example, the principal completed a doctoral program in education by the spring of 1999. Teachers also were encouraged to write grants to further their development and to upgrade their classrooms. Sojourner Truth had also participated in an exchange program with a school in Japan; during the three summers prior to our first visit, teachers from Sojourner Truth went to Japan and teachers from Japan came to Sojourner Truth. The principal spoke of an after-school lab supported by the Annenberg Foundation in which "teachers were paired together to work on classes in a risk-free environment." Some parents also were paired with teachers. Teachers reported gaining a greater respect and appreciation for the talents that the parents had to offer. The lab focused on language skills, listening skills, control skills, classroom management skills, higher-order thinking skills, and creativity. According to the principal, the teachers appreciated the time to work together.

Resources. Teachers were very proactive in obtaining grant funding to support their efforts. The funding received allowed for such things as the purchase of literature, a music education program, and a learning lab for teachers. During our visit in the fall of 1998, we were told that 20 teachers had won the Rochelle Lee grant for that school year. With the grant came seminars in which teachers read and discussed award-winning children's literature — reinforcing the "teacher as learner" in the community. Money from the grant was also being used to purchase books for the classroom. Title I funding supported a pre-kindergarten program. In addition, the donations of essentials, such as winter coats and eyeglasses, made a tremendous difference in the learning and well-being of students. Most notable, though, were the extensive capital improvements at Sojourner Truth. A very attractive new building, which housed the elementary school, was clearly the most visible difference funded by the resources the principal and staff were able to attract.

Thomas Jefferson Community Academy

Description of School

Thomas Jefferson Community Academy is a kindergarten-through-eighth-grade school serving an African American population. The principal characterized the community as somewhat isolated with a lot of single-family homes. Large populations of parents are drug-dependent and/or incarcerated. Jefferson Academy was put on a "watch list" because of low achievement scores. Ms. Roberts became principal in 1991 and fought for, and won, Title I funding for the school. During her second year, 1992, she transformed the school into a community academy, thus entitling them to additional funds. At Jefferson Academy, capital improvements were underway. The school had received new modules, new windows, exterior repairs, and interior

painting. However, these improvements were well overdue and came only after the principal fought continually for them.

While Jefferson Academy is a neighborhood school, a certain number of students from outside the neighborhood attend on a space available basis. Because of the school's academy status, the principal was able to hire with a good deal of discretion many new staff members, thereby reducing class sizes. During her first two years at Jefferson, Ms. Roberts had eight vacancies filled by long-term substitutes who were not professionally trained, certified teachers. In the spring of 1998, the principal reported that 75% of the staff was new since she came to Jefferson Academy.

How Grassroots Site-Based Management Was Implemented

Ms. Roberts promoted the implementation of student-centered, constructivist curriculum and instruction, emphasizing that "the students are connected [and] learning is very social." According to the principal, "Children have to be stimulated and they have to have opportunities to communicate and not just communicate by mimicking the answer. I mean we have to actually provide situations where they can work — where they can talk with one another. We want to make sure that [they] become learners and continuous learners who are adaptable to change."

Two key mechanisms encouraged this sort of teaching and learning. One mechanism was the increasingly prominent role of technology in the school. A well-attended and well-equipped computer laboratory allowed students to take part in creating products and in researching various topics. The principal's implementation of reciprocal learning was the second important mechanism through which active, constructivist teaching and learning were promoted.

In reciprocal learning, the teacher is the coach or guide facilitating, but not directing, the learning process. The process consists of four stages. The first is Prediction. Students look at the title and illustrations of a story and make predictions of what the story will be about. They discuss their predictions in their small groups and record them. They then report back to the rest of the class. There is then a stage of Questioning during which students develop open-ended questions about the story. They then open their books and begin to read. As the students read, they cite page numbers and paragraphs where answers to their questions can be found. They discuss this with their group and report back to the class — this is the Clarification stage. The last stage is Summarization during which students discuss and then write out within their groups a summary of the story. The process takes about a week. During the clarification stage, the teacher may introduce other topics, such as fact or opinion. Students

must be respectful and listen to each other, because when reporting back to the class, they are not supposed to repeat something that has been mentioned by others. Reciprocal learning was being implemented in all grades during the 1998-1999 school year. The principal developed a script for teachers to help them with the process, outlining approximately how much time should be spent at each stage. According to the principal, reciprocal teaching was well implemented at Jefferson Academy, but we found that teachers expressed some opposition and skepticism concerning the approach.

Teacher Buy-in. Based on our observations and discussions with teachers, decisions involving curriculum and instruction were made solely by the principal. Although the principal expressed a desire to develop leadership in her faculty members and to promote their professionalization, she did not relinquish control to them when it came to the core of their work. The principal's constructivist approach to education directly influenced instruction. Teachers were told to use Reciprocal Teaching techniques — there was no teacher discussion or vote. Based on our teacher focus group discussions, not all teachers liked Reciprocal Teaching or saw it as being effective. As one teacher stated, "Some of the things we did last year — that were good last year — this year are no longer good. We're doing it completely wrong. So a lot of teachers are experiencing frustration because last year they were told 'This is good; keep doing what you are doing.' And this year they are saying 'No, no, no, it's all wrong; I want it done this way.' " The principal stated that some of this resistance occurred because teachers did not want to relinquish some control of the teaching and learning to their students.

Professional Development/Training. A large part of the principal's philosophy about schoolwide improvement involved elevating the professional standing of teachers and having them assume greater responsibility. During the time of our visits, there were committees responsible for various activities and events, including the Outstanding Student Breakfast Committee and the quarterly school newspaper. The Outstanding Student Breakfasts were held once a month to recognize students who did well that month. There was also a special focus group of fifth and seventh grade teachers with whom the principal worked on incorporating technology into the curriculum. The teachers emphasized that Ms. Roberts stressed a team approach of teachers working together on grade level. They met twice monthly on grade level to discuss concerns, curriculum issues, and new business. Teachers who were not comfortable integrating technology with their teaching (which they were expected to do at least once a week) could get extra help before school or during their lab time. The principal assisted teachers having difficulty switching over to reciprocal teaching by observing them, modeling for them, and allowing them to observe other teachers.

Resources. Title I funds were used to reduce class sizes, to hire math teachers, and to upgrade all the computers. According to the principal, prior to the 1994 Title I re-authorization, "only the students at the bottom quartile were receiving those funds and now it seems spread throughout the building." The principal stated that she preferred to put the monies towards things that the children would not ordinarily have had, like instructional materials and field trips. There was an after-school program — the Lighthouse — that was Title I funded and open to all students. Students received tutoring in math and reading twice a week. The ongoing capital improvements at Jefferson Academy were beginning to make a difference in the overall appearance of the school. However, in the middle of winter, we saw broken windows in the main building. The largest portable building on the school grounds was dreary and dilapidated. Beyond the much-needed capital improvements and the Title I funds, Jefferson Academy received few supplemental resources.

Cross-case Analysis

Student Outcomes. The student outcomes are summarized in Table 2. The attendance rate at Jefferson Academy remained relatively constant over the nine-year period (1990-1991 to 1998-1999). Reading and math achievement, computed as the average of the third through fifth grade scores, improved over this time period. However, scores still remained within the bottom of the second quartile. During the spring of 1991, reading achievement was at the 19th percentile. In the spring of 1999, the percentile score improved by 10 percentile points to the 29th percentile. Gains in math achievement were not as large. In the spring of 1992, students scored at the 22nd percentile. In 1999, math scores had improved by 4.7 percentile points.

Baseline 1990-1991 achievement data were not available for Sojourner Truth Elementary; therefore the following year's scores served as a baseline. The attendance rate at Sojourner Truth Elementary increased over the eight-year period (1991-1992 to 1998-1999) from 94% to 97%. There were also substantial increases in both reading and math achievement based on the CTBS/4 during this time period for the 3rd through the 5th grades. Spring 1992 scores for reading achievement were the same as those for Jefferson Academy. By the spring of 1999, however, scores had increased by 29 percentile points. Improvements in students' math scores were even more dramatic, moving from the 17th percentile in 1992 to the 61st percentile in 1999. These improvements were achieved at Sojourner Truth despite an overall school enrollment that more than doubled over the time period, from 586 students in 1992 to 1220 in 1999.

Table 2
Summary of Grassroots Site-Based Reform Schools' Enrollment, Attendance, and CTBS/4 Outcomes by Year

	1991/1992[a]	1999
Thomas Jefferson Academy		
Student enrollment	871	982
Daily attendance rate	93	91
Reading Percentile (Grades 3-5)	19	29
Math Percentile (Grades 3-5)	22	26.7
Sojourner Truth Elementary		
Student enrollment	586	1220
Daily attendance rate	94	97
Reading Percentile (Grades 3-5)	19	48
Math Percentile (Grades 3-5)	17	61.3

Note: [a] The pretest year for Thomas Jefferson Academy was 1991 and the pretest year for Sojourner Truth Elementary was 1992.

Instructional Outcomes. The instructional outcomes, based on our classroom observations, are reported in Table 3. A total of 14 classroom observations were conducted at Jefferson Academy and 13 observations were completed at Sojourner Truth. At Jefferson Academy, despite the principal's focus on constructivism, the occurrence of authentic instruction was relatively low. The school's score of 0.15 on the Authentic Instruction factor placed Jefferson Academy at the 44th percentile. With a score of 0.39 on the Authentic Instruction factor, Sojourner Truth Elementary, on the other hand, had a moderately high occurrence of authentic instruction over the study. This Authentic Instruction score placed Sojourner Truth at the 65th percentile among schools in our study. The average percent of students we observed exhibiting on-task behavior in the classroom was at or near the study average of 74% in both schools.

Teacher Outcomes. At Sojourner Truth Elementary, support for teachers' professional development was illustrated by trust in the teachers' teaching ability and judgment and by the flexibility teachers were given. Each teacher was urged by the principal and by colleagues to continue developing as a professional through attending conferences, pursuing advanced degrees or certifications, and applying for professional development grants. The exchange program for teachers with the school in Japan was another example of the opportunities provided to teachers to develop and grow professionally. Staff development topics were chosen by teachers and teachers met regularly to discuss their experiences at professional conferences. The after-school labs allowed teachers to structure their learning from colleagues and parents in ways that were personally productive. All of these activities, along with the principal's support, created a strong professional climate for teachers.

Table 3
Summary of Grassroots Site-Based Reform Schools' Authentic Instruction and Percent On Task Outcomes

	N	Percentile	M (SD)
Thomas Jefferson Academy			
Authentic Instruction (11-item scale)	14	44	-0.15 (1.22)
Percent of Students on Task	13		74.19 (23.37)
Sojourner Truth Elementary	13		
Authentic Instruction (11-item scale)		65	0.39 (1.21)
Percent of Students on Task			76.12 (20.29)

At Jefferson Academy, a significant part of the principal's philosophy about schoolwide improvement included raising the professionalism of teachers and having them assume greater responsibility. The principal spoke of her teachers needing a great deal of support because they were so new. One teacher stated that while they were "restricted to the actual objectives," it was up to the teachers "to decide what they want to use to teach, if they want to use the basal, if they want to use technology, if they want to do a hands-on presentation." Teachers also reported that they participated in the decision-making process at Jefferson Academy: "We take part in planning and doing things that will affect our students and involve our teachers." However, it did not seem they had any say in doing Reciprocal Learning.

The principal said that she provided a good deal of professional development for her long-term substitutes, but she did not specify what was offered. She also said that she worked with the fifth and seventh grade teachers on incorporating technology into their curriculum. Teachers who were not comfortable integrating technology with their teaching (which they were expected to do at least once a week) could get extra help before school or during their lab time. The principal assisted teachers having difficulty adopting reciprocal teaching by observing them, modeling for them, and allowing them to observe other teachers. While the principal believed in the professional empowerment of teachers, it was clear that she typically decided what her teachers needed to learn (e.g., Reciprocal Learning, or integrating technology into the curriculum) and arranged the in-service or provided it herself. Despite the principal's good intentions, the professional climate at Jefferson Academy did little to encourage inventiveness and active problem solving among teachers. Although the principal hoped to improve instructional practices throughout the school, these improvements were achieved in large by imposing on the work of teachers and by limiting the professional standing of teachers.

LOCALLY MANDATED RECONSTITUTION

The Context

Reconstitution began in this West Coast district during 1983 under the terms of a consent decree, which was ordered as one of the outcomes of a desegregation lawsuit. Since this decree, school reconstitution has spread across the country to other states and school districts. Under reconstitution, the entire faculty and administration at a low-performing school is vacated and a new staff is hired. New staff in this district must be committed to reforming the school and improving student achievement according to the principles set forth in eleven philosophical tenets. Teachers and administrators may apply for their former jobs, and in some cases they are rehired. Tenured educators are guaranteed a teaching position somewhere in the district.

Under the school improvement and reconstitution process developed by the district, low-performing schools were identified through an assessment process based on seventeen indicators agreed to by the parties to the decree. Once targeted, schools entered the school improvement program (SIP), and received additional assistance from the district and an opportunity to improve performance. Most SIP schools graduated from this program, but those that did not were reconstituted. According to consent decree revisions adopted by the parties and approved under the desegregation lawsuit, three schools per year were to be reconstituted beginning in 1994.

A key component of the SIP and reconstitution process was the allocation of extra financial and human capital resources to low-performing schools. However, in practice, allocation of consent-decree funds varied significantly from school to school, and sometimes schools that were reconstituted actually experienced a substantial drop in revenue. In addition, as more schools participated in the process, less money was available to each school.

Previous Research on the Effects of Reconstitution

The reconstitution or reorganization of low-performing schools is a "get-tough" reform policy that has grown in popularity throughout the 1990s. Over the past decade, Atlanta, Houston, Milwaukee, Paterson, N.J., San Antonio, Cleveland, and Chicago, among other districts, have resorted to some version of reconstitution. According to a recent report, a total of 16 states have the power to close, take over, or reconstitute failing schools (Jerald & Boser, 1999). While the actual process of reconstitution may differ across districts, it implies that an agent external to the school has responded to chronic low student performance by removing and

replacing a school's principal and at least a portion of its teaching staff. Reconstitution generally is the final step in a district's or state's school accountability process, reserved for those schools that do not show improvements despite repeated warnings or other interventions.

The idea behind school reconstitution is to "jump-start" dysfunctional schools by bringing in a fresh, new, committed staff (Hardy, 1999). A representative of a local teachers' union referred to reconstitution as the "Clint Eastwood approach to reforming schools. You just pull out a gun and blow them away" (Hendrie, 1998, p. 17). An ongoing research project by Jennifer O'Day of the Consortium for Policy Research in Education (CPRE) will provide a much-needed in-depth analysis of reconstitution. However, at this time, there is no definitive empirical research assessing the effectiveness of this severe policy option (Hardy, 1999).

The Case Studies

Three West Coast schools involved in the reconstitution process were included in our study. We identified the schools with the help of the district office. We requested visits to two reconstituted schools and one school under threat of reconstitution. Santiago Elementary and Booker T. Washington Elementary had been reconstituted in 1994 and 1996, respectively. The third school, Harriet Tubman, was placed under threat of reconstitution in the spring of 1994. The general characteristics of the three schools are summarized in Table 4.

Table 4
Characteristics of Reconstitution Schools (Based on 1996/1997 data)

School	Enrollment	Free-lunch Eligibility	Racial/Ethnic Composition
Santiago	362	77%	39% African American 43% Chinese 5% Caucasian 3% Filipino 2% Latino
Booker T. Washington	358	99%	44% Latino 39% African American 5% Caucasian 4% Chinese < 1% Native American < 1% Filipino
Harriet Tubman	423	74%	44% Latino 34% African American 9% Chinese 5% Filipino 2% Caucasian < 1% Native American

Santiago Elementary

Description of School

Santiago is a kindergarten-through-fifth-grade elementary school that serves a population of predominantly Asian and African American students. Students come from neighboring housing developments and many are bussed in from outside the community. An entirely new staff of teachers, most of whom were new to the profession, was hired when the school was reconstituted prior to the 1994-1995 school year. The pre-reconstitution teachers were placed at other schools in the district. The newly appointed principal, Ms. Johnson, hired all the teachers, paraprofessionals, and secretaries (she kept the same custodians). The principal, who had complete authority over hiring decisions, was told by the district office "to hire from the top down." According to Ms. Johnson, when she arrived at Santiago the place was "a mess." There were no supplies and very few textbooks and materials because the former teachers took these things with them when they left.

In discussing the hiring process, Ms. Johnson stated that experienced teachers did not apply because "no one wants to come to a reconstituted school." She also felt that "the salary was not high enough to attract veteran teachers." Ms. Johnson would have liked to have had the option to retain some veteran staff, but this was not possible, given the district's policies at the time.

How School Improvement Was Implemented After Reconstitution

Efforts to improve the newly reconstituted Santiago began with a focus on student behavior. Prior to reconstitution, many students cut classes and went to the neighborhood stores. Some students shoplifted from the stores and got into trouble with the local merchants. On the first day of school after reconstitution, students who attempted to cut classes were rounded up and brought back to school. The principal posted a number of monitors outside during recess and the school doors were locked while classes were in session. During the first week of school, students practiced entering the building in a quiet and orderly fashion. The school worked for 12 weeks with a consultant, who was funded by the district, and developed a proactive discipline plan.

A second prominent effort at Santiago involved outreach to the community and parents. The principal and staff worked hard to develop and maintain positive relationships with local businesses and church groups. The principal stated that they "walked the beat," introducing themselves to store owners and making contacts in the neighborhood. The merchants also noticed that the students were no longer cutting school and coming to their stores to steal. Good relationships with businesses in the community developed. As a result, the principal

stated that Santiago received a lot of "freebies." For example, a recent blackout prevented school personnel from preparing lunch for the students. The principal went to the local supermarket and was given shopping carts full of food.

The principal hired a parent coordinator to build relationships with parents and to increase parent involvement. Using money from various school fund-raising activities, the principal created a resource room within the school for parents with computers, which parents used to prepare resumes and to surf the Internet. Workshops for parents on resume writing and interviewing for a job were initiated and a group of parents was taken to a job fair held downtown. Parent education classes were held throughout the year as well as a parent conference held once a year. A washer and dryer were placed on the premises for parents to wash their children's uniforms. Parents may sign up to use the machines and, while the clothes are washing, the parents must go into their child's classroom and help.

Finally, since the 1997-1998 school year, the teachers had been using Success for All (SFA) to upgrade their literacy program. Because Santiago was a reconstituted school, the district offered to pay for the training and the materials costs associated with SFA. The district support, along with low reading scores, were strong incentives to adopt the program. After 80% of the teachers voted in favor of adopting the program, the training and implementation began.

Teacher Buy-in. Teachers were generally supportive of efforts to improve student behavior and to improve the school's relationships with parents and the community. Also, because teachers voted on SFA there was a fairly high level of teacher buy-in for the reform. The principal or the SFA facilitator monitored classrooms every day to make sure the SFA program was being implemented correctly. After the observations, the principal or facilitator provided the teachers with written feedback. Teachers needing additional help implementing SFA were sent to observe the classrooms of colleagues who had strong SFA implementations.

According to one teacher, "It [SFA] really makes a big difference for the children. All children learn differently and at different rates. SFA allows the children to move at their own rate." Another teacher added, "I think especially for the upper grades, those kids that are just stuck, all of a sudden they're reading." Because the students did not do as well on the state test during the 1997-1998 school year, even though SFA was going well, teachers were trying to figure out the discrepancy and deal with it. Therefore, reactions to the primary reform affecting teachers, SFA, were generally positive and supportive.

Professional Development/Training. The principal, Ms. Johnson, reported that a great deal of professional development had been offered to the teachers. Because there were many new teachers, including 10 with emergency credentials, Ms. Johnson thought this met a

significant need. The teachers were provided with professional development by an outside consultant and by the district during the summer after the first year of reconstitution. The principal thought that these activities were helpful and long in coming as she had had to ask persistently for professional development help. More recently, in the fall of 1997, all teachers received training from the outside consultant on the implementation of the SFA reading program. Teachers stated that they had some say in what in-services were offered, in that they were polled for possible topics. Teachers reported they also had a voice in selecting the curriculum, in that they voted to implement SFA.

According to the principal, staff cohesion increased during the reconstitution process, as evidenced by grade-level meetings and SFA component meetings. The principal did not attend those meetings because she felt the teachers were more open and candid if she was not present. Anything that she needed to know was passed on anonymously by the lead teacher. The teachers also reported that, since reconstitution, there was greater universal organization within the building in terms of materials, focus, and direction. They most frequently reported an increase in articulation between grade levels concerning curriculum and greater consistency with materials.

Resources. In general, the school appeared well funded. All the walls were newly painted and there had been other more extensive capital improvements, including the refurbishing of the library and the school's front office. The district provided these improvements after the school had been reconstituted. The school also received $376,000 of consent decree money, which supported the salaries of para-professionals, a Reading Recovery teacher (during the 1997-1998 school year), a counselor, a parent coordinator, and 50% of the SFA facilitator's salary.

The principal had brought a good deal of funding into the school as well. Santiago received a $400,000 grant from Healthy Start during the 1997-1998 school year to be spent over the following three years. There was a primary intervention program targeting kindergarten and first grade students who were having problems in their homes. A specially trained interventionist worked with these students through play therapy. Santiago obtained funding from private sources as well. For instance, Hills Brothers Coffee donated $58,000 to be used across all grades for the visual and performing arts.

At the time of our first visit, federal Title I services targeted students in the bottom quartile and were provided within the regular classroom by paraprofessionals, who worked with students to reinforce what the regular classroom teacher was teaching. At the time of our second visit, the principal stated that Title I funds were being used across the board, as Santiago was a schoolwide Title I school. A significant portion of the school's Title I funding also supported paraprofessionals who tutored in the afternoon as part of SFA.

Booker T. Washington Elementary

Description of School

Booker T. Washington is a kindergarten-through-fifth-grade school that serves a predominantly Latino and African American population. Washington Elementary was reconstituted in 1996 and, like Santiago, has struggled to attract veteran teachers. As one Booker T. Washington Elementary teacher stated, "At a reconstituted school that's always been considered really poor, really poor scoring, you're not going to get 'seasoned teachers' to come here. What you got was new teachers, and then you got teachers that weren't even teachers. You got emergency credentialed teachers." In contrast to Santiago, some veteran Booker T. Washington teachers on the staff prior to reconstitution were hired back after reconstitution. There had been some turnover in the principal position since reconstitution. The principal who was initially appointed took a position at the state department of education after serving at Booker T. Washington for only one year — its first year of reconstitution. The new principal, Ms. Baker, took over the following school year.

How School Improvement Was Implemented After Reconstitution

The district mandated the Success for All (SFA) reading program in the reconstituted Booker T. Washington. During the first year of reconstitution, a consulting group worked closely with the school to provide SFA training and implementation help. At the time of our first visit in the fall of 1997, there was a new SFA coordinator, who was formerly a Reading Recovery teacher. The new coordinator did not seem very committed to SFA and was reluctant to be interviewed. According to the SFA coordinator, the teachers needed help implementing the program with more fidelity. The poor implementation, though, was due in part to the fact that the former principal and the coordinator did not manage the program well. For instance, the SFA coordinator did not model proper implementation for the teachers and the principal did not hire enough tutors for the program. During the first year of SFA implementation, the Spanish SFA program, Éxito Para Todos, also suffered from poor implementation due to poorly written materials. In their attempts to implement the program, the bilingual teachers had to exert a considerable amount of extra effort. Eventually, the SFA developers responded and created better-written Spanish materials, which the teachers found to be much improved.

At the end of the school year prior to our second visit, Booker T. Washington Elementary was taken off the SIP list. According to the principal, SFA was "running a little more smoothly than last year." Ms. Baker thought that the structured nature of the program was good for inexperienced teachers who did not know how to teach reading on their own and who were generally intimidated by teaching. However, she also stated that the veteran teachers

hated the scripted nature of SFA. Ms. Baker also thought that the program emphasized student potential rather than student weakness and allowed for inclusion of some special education students. She also liked the 90-minute reading block because it ensured that everyone got at least 90 minutes of reading. There were two SFA tutors who worked solely with the first grade, but upper-grade teachers complained there were no tutors for the fourth or fifth grades. When asked how SFA was going, one teacher responded that it was good for their population of low-income, low readers and that it made teaching easier. However, this teacher also felt SFA was boring to teach and not for all students: "Some kids are not going to learn from straight phonics. They have to be interested contextually." This teacher also saw SFA as limited because it lacked a component for fostering creativity. It was clear from our visits that SFA was not generally well received or well implemented by the faculty.

The post-reconstitution adjustment had been difficult at Booker T. Washington. A reading teacher, who was one of a few teachers hired back from the pre-reconstitution faculty, stated that there had been some tension between the new teachers and the pre-reconstitution veterans who were hired back. She felt that the new teachers looked down on the veteran teachers as failures. She also thought that the inexperienced teachers could learn a lot from the veterans, but that the young teachers' opinions of the veterans hindered the development of professional relationships. In this teacher's mind, these rifts had negatively impacted staff cohesion.

On the other hand, a newly hired teacher we spoke with thought that reconstitution had led to the formation of a "good mix of teachers that go well together." She claimed, though, "they didn't make changes at the other end," in arguing that some of the very disruptive students should have been split up and sent to other schools. The teachers also complained that there were very few textbooks and other resources available to them after reconstitution, as most of the former teachers had taken these materials with them. For example, one teacher was left with only14 workbooks, but had 25 students in her class. Reflecting on reconstitution, she said that it was like being new tenants in an apartment: "You have to go find out if the sink is broken. No one is going to tell you ahead of time."

The children also were affected by reconstitution. As they returned to the reconstituted school during the fall of the 1996-1997 school year, many became quite upset and confused when they realized that the teachers who they had grown to know were now gone. According to one teacher, the students felt that reconstitution was their fault: "The kids were very, very aware of the test scores and their performance and they just took that to mean 'Oh my God. It's me and I'm stupid.' "

Teacher Buy-in. The staff never voted to implement SFA, as the program had been mandated by the district. As with other top-down initiatives, there was an initial lack of buy-in

among teachers. According to Ms. Baker, the implementation of SFA had been rocky. During the first year, the teachers were overwhelmed with getting to know the children and each other. Teachers made modifications to the SFA curriculum as they saw fit. Ms. Baker told us that during her first year as principal at Booker T. Washington Elementary, the outside consultants responsible for facilitating the SFA implementation exerted "a lot of heavy-handed pressure" when confronted by the mild resistance of the teachers. Ms. Baker did not appreciate this, as she was attempting to focus on assessing and addressing a range of needs at the school beyond implementation of SFA. At the end of the 1997-1998 school year, the principal asked teachers to decide if they wanted to continue using SFA; if so, they had to commit to implementing it without modifications. According to Ms. Baker, the faculty agreed to make this commitment.

Despite the ongoing problems with implementing the district-mandated SFA program, the professional relationships between Ms. Baker and her staff were generally positive. The teachers felt positively about her as an organizational and instructional leader and most enjoyed her inclusive leadership style.

Professional Development/Training. When Ms. Baker first came to Booker T. Washington, she surveyed teachers on what types of staff development they needed. One of the most important requests was training on how to teach writing. During our first visit, Ms. Baker was in the process of getting that training organized. She was also planning training on classroom management, which was requested by teachers as well. Staff development days were provided once a month. Ms. Baker also allowed teachers to choose how they spent their staff development funds by allowing them to attend conferences of their choice, such as the National Association of Black School Educators convention and the state math conference.

During our February 1999 visit, the principal expressed that the staff needed more professional development. Booker T. Washington had become a full-inclusion school and needed support in addressing children with special needs in the regular classroom. The principal had been making suggestions to teachers on a minimal level. She also expressed a desire to have her more experienced teachers coach the less experienced teachers. According to the principal, "We need to utilize experience better. I think there's a lot of experience and skill that we need to capitalize on. But we do need the professional development in addressing the needs — addressing students with special needs." According to Ms. Baker, one of her foci that year was helping teachers diversify their instruction and move them from full-class instruction to more student-centered learning activities.

All teachers received SFA training during the summer of 1998. New teachers hired after the summer received help from the on-site SFA facilitator. One teacher, who came after school started, co-taught for about four weeks until he had the rhythm of the program. Ms. Baker said she felt the consultants were satisfied with how SFA was being implemented, but

during our last visit she was clearly self-conscious about this issue and about how we might evaluate the status of the SFA implementation.

Resources. Ms. Baker stated that the district no longer had the funds available to provide the reconstituted schools with extra resources. Booker T. Washington Elementary received an abundance of money the first year, but not since. During the second year after reconstitution, resources were provided primarily in the form of support services from an administrative liaison and in funding specifically for the SFA program. Undoubtedly these resources were helpful, but in 1998-99, the school received $200,000 less than in previous years, as SIP funds had been cut. A teacher complained that Booker T. Washington Elementary had to be reconstituted on a shoestring budget, whereas schools in the two earlier phases received far more money. The general opinion was that while the school had received more resources with reconstitution, it still was not enough.

During the 1997-1998 school year, Booker T. Washington Elementary was in its last year of partnership with the Nestle Beverage Company, which provided funds for children to select a book to take home for their birthdays, as well as providing funds to increase the multicultural literature in the library. Additionally there was a partnership with an investment company whose employees provided tutoring for children.

Title I funding paid for a great many services. It covered one third of the SFA facilitator's salary and one third of the math/science specialist's salary. It also covered the salary of one paraprofessional, who helped as a parent liaison and as a tutor. The remainder was used to cover instructional materials. Title I money also was used for some professional development activities.

During both visits, there was a paucity of mental health services. According to the principal, Booker T. Washington Elementary served one of the largest project populations in the school district, but there were no counselors or social workers. During the 1997-1998 school year, a school psychologist came once a week. Also at this time, the school did not have the SFA family support team. During the 1998-1999 school year, there was a coordinated service team that came once a week. The team consisted of a nurse, who focused mainly on outreach; an instructional specialist; and a psychologist, who did testing not counseling. The need for mental health support became particularly acute after the transition to a full-inclusion model. The principal was trying to improve mental health services by applying for a Healthy Start grant for the 1999-2000 school year. She was also working on building a partnership with a local hospital's psychiatry department.

Harriet Tubman Elementary

Description of School

Harriet Tubman Elementary, a kindergarten-through-fifth-grade elementary school serving a predominantly Latino and African American population, was placed on the SIP list in the spring of 1994. The principal, Ms. Carson, did not know the school was on the list when she accepted the position. The faculty, who were well aware, met that summer to determine their plans for school improvement. They planned to implement a new literacy program and to initiate a Reading Recovery program. Ms. Carson went along with these plans for the first year of SIP, but then implemented her own agenda, which included the Optimal Learning Environment (OLE) program, the following year. Ms.Carson also emphasized that teaching students test-taking skills was an important part of the curriculum.

How School Improvement Was Implemented

When asked to compare the school before and after SIP, the principal said it was like a new school — "Everybody is working to get off the list." Ms. Carson thought that the key to getting off the list was having a "positive school culture," and that the second most important thing was "an emphasis on curriculum." She thought it was important to have consistency across the grade levels. Ms. Carson did not feel that being on the SIP list made the school change. She felt it would have happened anyway because she would have found ways to fund and to implement the programs that were important to the school's improvement.

One teacher stated that she found the reconstitution process frustrating and hard; being on the list was a negative label. But she added, "After going through it, I realize that it's actually a really good process because it helps you clean up your school — like get your curriculum down and really get staff that are committed." Another teacher had very different views. He felt the problem with students' lack of achievement resided with the parents and the home and that it was unfair to lay all the blame on the teachers. He felt that the lack of discipline students received, as well as the lack of an emphasis in the home on education, were the real problems. He did not see the reconstitution process as helpful. Actually, he felt if there was going to be reconstitution it should start at the district. He said common sense can tell you what's wrong in the education system — a lack of resources, large class sizes. Although he did not see a benefit from being on the SIP list, he did acknowledge that they received more financial support because they were on the list.

One teacher, when asked about what should be included in the criteria for getting off the SIP list, stated that school climate should be considered. Before focusing on improving academics, initial work may have to address student behavior and discipline. Unfortunately,

though, improved behavior may not immediately be reflected in the test score results. "So," the teacher argued, "even though teachers worked hard to achieve better student behavior, they may be seen as having not accomplished anything."

There was a great deal of pressure felt by the staff during the 1997-1998 school year as it was their third year of being on the SIP list. The most discussed process was the development of the school portfolio. According to the principal and faculty, the portfolio was one of the primary products for which the school was held accountable. Great care was taken in developing an attractive display of all that the school had accomplished during the year. The principal expressed that everyone became consumed by the process of preparing it, and felt that she and her staff could have focused their energies in other far more constructive ways. Every teacher was involved in this time-consuming process. Students were also involved in presenting the portfolio to district representatives. A grade was given for each section of the portfolio. The principal stated that they did well in every area but the Safety Plan. Once they were taken off the list, at the end of the 1997-1998 school year, the atmosphere was more relaxed.

The principal focused efforts on upgrading curriculum and instruction throughout the building. Ms. Carson began implementing the Optimal Learning Environment (OLE) program during the 1996-1997 school year. She had used it at another elementary school. The program was funded through the State Department of Education, but Ms. Carson said that the school's Title I funds were also used to support the program. According to Ms. Carson, "OLE is a child-centered curriculum for language arts." OLE was initially developed as a program to include special education students in regular classrooms, but now has broader applications. The district provided an on-site support person for OLE who served at the school one day per week.

Teacher Buy-in. At the time of our first visit, Ms. Carson seemed to think that OLE was well implemented throughout the school. But teachers expressed uneven support for the program. Many teachers apparently had not been trained in OLE. Ms. Carson decided to discontinue Reading Recovery because she claimed that it helped only her Spanish bilingual students. An outside consultant group approached the principal about implementing Success for All, but Ms. Carson thought it would be counter-productive to implement in addition to OLE. She also found SFA too structured for her taste. In addition to OLE, the school pushed to get more teachers to use technology in the classroom. Ms. Carson hired a resource teacher to show classroom teachers how to use technology effectively.

During our visit in February of 1999, Harriet Tubman Elementary was still using OLE. They also had started a new reading series, Solares, which is the Spanish counterpart of the Scholastic reading series used in the bilingual classes. The district had handed down new

language arts standards. Ms. Carson said that the new language arts standards did not interfere with OLE because OLE was the method and not the content.

Professional Development/Training. Consultants provided staff development in using technology in the classroom. Training had been given in OLE (but teachers reported that not everyone had been trained). The district had also offered workshops on literacy and the new standards for language arts.

Teachers reported that a hindrance to the school improvement process was a large turnover of teachers during the first year the school was on the SIP list with 20 out of 24 teachers leaving. Teacher stability remained high during the following years. The principal reported that while she felt she had a good faculty, many of the teachers were inexperienced and in need of a great deal of support. This hindered the improvement process. Support was given through CIP (Critical Improvement and Professional Development). CIP involved a master teacher who would observe classes to make sure teachers were following strategies accompanying the new literature series (Solares) and the new district-mandated language arts standards. Ms. Carson reported that the district could have been more helpful during the three years by providing more support and more experienced teachers.

Resources. At the time of our first visit, Harriet Tubman's Healthy Start grant had expired, but the school still had a full-time social worker, play therapy, and an after-school program. There was also a nurse and a mental health professional at the school. There were a number of volunteers from AmeriCorps, YMCA, America Reads, and a local university. Title I money funded the technology teachers as well as paraprofessionals. The school also received $30,000 when they were put on the SIP list. The principal complained that the reconstitution process was backwards. She felt that the additional funds should help schools like hers before they are reconstituted rather than after they are reconstituted. Our visits to the two reconstituted schools underlined her point somewhat, in that these schools did appear to be more attractively furnished and painted, and better funded, than Harriet Tubman.

Cross-case Analysis

Student Outcomes. The student outcomes are summarized in Table 5. The attendance rate at each of the schools remained the same for the years for which we have data (1996-1997 to 1998-1999), ranging from 97% to 99%. Reading and math achievement were based on the average performance of third through fifth grade students on the CTBS/4 in the spring of 1995 and the SAT/9 in the spring of 1999. During the spring of 1995, the highest reading and math achievement was seen at Santiago with scores at the 41st and 70th percentile, respectively. At Washington and Harriet Tubman, reading achievement scores were at or near the bottom

quartile (18th and 26th percentile, respectively) and math achievement was at the 23rd percentile for both schools. The average performance in reading achievement decreased in each school. The largest decreases occurred at Santiago and Harriet Tubman (9 and 7 percentile points, respectively). A slight decrease of 1 percentile point occurred at Washington. The average performance on math achievement increased slightly at one of the reconstituted schools, Santiago, and at the school under threat of reconstitution, Harriet Tubman, with respective increases of 2.33 and 1.33 percentile points. Math achievement decreased at Booker T. Washington by 5.33 percentile points.

Table 5

Summary of Reconstitution Schools' Enrollment, Attendance and Test Score Outcomes by Year [a]

	1995	1999
Santiago Elementary		
Student enrollment	362[b]	342
Daily attendance rate	99[b]	99
Reading Percentile (Grades 3-5)	40.67	31.67
Math Percentile (Grades 3-5)	69.67	72
Booker T. Washington Elementary		
Student enrollment	358[b]	353
Daily attendance rate	98[b]	98
Reading Percentile (Grades 3-5)	18.33	17.33
Math Percentile (Grades 3-5)	23.33	18
Harriet Tubman Elementary		
Student enrollment	423[b]	378
Daily attendance rate	97[b]	97
Reading Percentile (Grades 3-5)	26.33	19.33
Math Percentile (Grades 3-5)	23	24.33

Note: [a]Test score data from 1995 through 1998 are based on the CTBS/4, and data from 1999 are based on the SAT/9.
[b]Student enrollment and daily attendance data were not available until 1997.

Instructional Outcomes. Mean scores obtained for authentic instruction and percent on task are presented in Table 6. A total of eight classroom observations were conducted at Santiago, seven at Booker T. Washington, and nine at Harriet Tubman. Despite the struggles experienced at Booker T. Washington with the initial rocky implementation of Success for All, the school's score on the Authentic Instruction factor was relatively high (0.53), placing the school at the 70th percentile. With scores of 0.18 and 0.14, respectively, on the Authentic Instruction factor, Santiago and Harriet Tubman had a moderate occurrence of authentic instruction over the study. Their scores placed them at the 57th and 55th percentiles, respectively. The average percent of students we observed who exhibited on-task behavior in the classroom was high for the two reconstituted schools. An average of 90% of students were

on task at Santiago and 82% were on task at Booker T. Washington. While not as high, on average, 76% of students were on task at Harriet Tubman.

Teacher Outcomes. Rather than building the capacity of teachers, reconstitution is designed to remove apparently ineffective teachers from a school and replace them with new teachers, many of whom are inexperienced. Large numbers of inexperienced teachers made staff development a top priority for the principals. Due to the persistence of the principal at Santiago, an outside consultant provided staff development during the second year of reconstitution. The principal and teachers at Booker T. Washington Elementary spoke of the lack of professional development opportunities they received from the district. This lack of professional development was especially difficult with the school's transition to a full-inclusion model.

Although Harriet Tubman Elementary was never actually reconstituted, the process of working itself off the reconstitution-eligible list achieved results similar to those of the reconstituted schools. After Tubman was threatened with reconstitution, there was a large turnover of staff. Consequently, as found in the reconstituted schools, Tubman was left with a new faculty comprised of many inexperienced teachers.

The turnover of staff, combined with tension between pre-reconstitution teachers and new staff, negatively impacted staff cohesion. Eventually, some of the newly hired teachers formed good, collaborative relationships.

Table 6

Summary of Reconstitution Reform Schools' Authentic Instruction and Percent on Task Outcomes

	N	Percentile	M (SD)
Santiago Academy	8		
Authentic Instruction (11-item scale)		57	0.18(0.49)
Percent on Task			90.25(12.00)
Booker T. Washington Elementary	7		
Authentic Instruction (11-item scale)		70	0.53(0.82)
Percent on Task			82.00(13.99)
Harriet Tubman Elementary	9		
Authentic Instruction (11-item scale)		55	0.14(1.22)
Percent on Task			76.31(12.86)

A Nationally Recognized Whole-School Reform

The Context

The implementation of externally developed, schoolwide reform models is a school improvement process being adopted by rapidly growing numbers of schools and districts (see Herman et al., 1999; Northwest Regional Educational Laboratory, 1998). Like nine other school districts across the country, the Southern district in our study worked in collaboration with a private, nonprofit group, the New American Schools (NAS) Development Corporation, to offer schools from throughout its jurisdiction the opportunity to adopt one of seven externally developed, nationally recognized reform models. We tracked the progress of two schools implementing one of the most popular of these programs, Roots & Wings, which incorporates and builds upon the Success for All reading program (Slavin & Madden, 1999).

The NAS project began in 1991 as a response to Goals 2000. The project was charged with securing financial support from foundations and corporations to fund new designs for "break-the-mold" schools. From among hundreds of proposed school reform designs, 11 received funding and seven remain today (Smith et al., 1998). The seven designs, as outlined by Kearns and Anderson (1996), include Atlas Communities, Audrey Cohen College, Co-NECT Schools, Expeditionary Learning Outward Bound, Modern Red Schoolhouse, The National Alliance for Restructuring Education, and, the model we studied, Roots & Wings. All of these designs stress a constructivist model of learning, emphasizing active problem solving, cooperative learning, and project-based tasks.

In 1995, after developing and piloting the designs, NAS formally launched its dissemination operation by inviting districts and states to "scale up" the models in schools within their jurisdictions (Smith et al., 1998). Through a proposal process, 10 jurisdictions, including the Southern district in our study, were selected by NAS to participate in the scale-up phase. Through systemwide meetings, district officials familiarized all principals and school improvement teams with the models. The district began accepting applications from schools during the 1995-1996 school year and continued reviewing applications in ensuing years. One school in our study, John F. Kennedy Elementary, began implementation of the Roots & Wings design during the 1995-1996 school year. The other school we studied, Martin Luther King, Jr. Elementary, began implementing Roots & Wings one year prior to the 1995-1996 scale-up. Between district support (e.g., arranging with the Roots & Wings developer to obtain masters of the reading materials, and then copying them in-house and distributing them to schools), actual funding provided for professional development and training, and additional support provided through Title I and other sources, most of the expenses associated with implementation of Roots & Wings were covered.

Previous Research on the Effects of Roots & Wings

Roots & Wings extends and broadens a successful reading program, called Success for All, developed at the Johns Hopkins University, by adding innovative programs in mathematics, social studies, and science. Roots & Wings has two primary goals for all students: (1) achievement of world-class standards in reading, writing, mathematics, science, history, and geography; and (2) development of problem-solving and self-reflection skills. The Roots & Wings curriculum is composed of several parts. The reading component (Success for All) is called Reading Roots for beginning readers (K and 1) and, later, Reading Wings (grades 2 - 6). Most schools begin Roots & Wings by implementing the reading curriculum and then in successive years adding the MathWings and WorldLab components. MathWings provides the mathematics program for grades 1 through 5. Based on NCTM standards, MathWings makes extensive use of cooperative learning, games, discovery, creative problem solving, manipulatives, and calculators. WorldLab integrates the teaching of science and social studies through active and engaging simulations and group investigations. Students role-play various people in history from different parts of the world and from various occupations. For example, they work as an engineer to design efficient vehicles, or they repeat famous scientific experiments as if they were Ben Franklin or Thomas Edison. In all of the activities, students work in cooperative groups, do extensive writing, solve problems, and use reading, mathematics, and fine arts skills learned in other curriculum areas.

While Roots & Wings is a relatively new program just developing a field research base, the Success for All model, which provides the reading/writing/language arts curriculum and instructional strategies and other program components (e.g., family support team and individual tutoring) for Roots & Wings, has a well-established research base (Slavin & Madden, 1999). Data exist comparing matched SFA and traditional schools (Slavin et al., 1996) as well as comparing SFA to other reform models (Slavin & Madden, 1999; Slavin et al., 1996). These comparisons consistently reveal strong effects for SFA, especially for low-achieving students.

These positive results appear to be replicable across multiple sites and also apply to various measures of reading achievement at every grade level from 1 to 5 (Slavin et al., 1996). Effects tend to increase progressively with each year of implementation. Thus, the outcomes of first grade students attending schools in the second year of SFA implementation are typically better than the outcomes found at the end of the first year of implementation. For a comprehensive discussion of the effectiveness of SFA, see Slavin and Madden (1999).

The Case Studies

Two Southern schools implementing the national Roots & Wings whole-school reform model were included in our study. Each school was identified as implementing the Roots & Wings program as part of the district-wide whole school reform initiative. In collaboration with the district, we identified two high-poverty, predominantly minority Title I schools that were using Roots & Wings to make needed improvements. John F. Kennedy Elementary began implementation of Roots & Wings during the 1995-1996 school year and Martin Luther King, Jr. Elementary began during the 1994-1995 school year. The general characteristics of the two schools are summarized in Table 7.

Table 7

Characteristics of Nationally Recognized Whole School Reform Schools
(Based on 1994/1995 data)

School	Enrollment	Free-lunch Eligibility	Racial/Ethnic Composition
John F. Kennedy	474	98	100% African American
Martin Luther King, Jr.	297	93	99% African American 1% Caucasian

John F. Kennedy Elementary

Description of School

John F. Kennedy (JFK) Elementary is a kindergarten-through-fifth-grade elementary school with an African American student population. JFK Elementary began to change its curriculum and instruction when the school adopted the Success for All model in 1994-1995. The NAS Roots & Wings model addressed most aspects of the School Improvement Plan (SIP) — math, reading comprehension, and parental involvement. Therefore, the school elected to implement the Roots & Wings model during the first year of the district-wide NAS scale-up in 1995-1996. All teachers who decided they did not want to participate in implementing the model were granted liberal opportunities to transfer to other schools and reform models they preferred.

The faculty became increasingly confident and supportive of the reading program during the second year of implementation in 1996-1997. However, during 1996-1997 the faculty also attempted to implement the MathWings and WorldLab components of Roots & Wings. The principal and faculty encountered problems when they attempted this full

implementation of the Roots & Wings model and decided to revise their implementation schedule.

How Roots & Wings Was Implemented

The principal, Ms. Parker, expressed overall satisfaction with the progress of Roots & Wings at JFK. Initial training for Success for All was provided on-site by SFA trainers from Johns Hopkins University. The faculty took advantage of additional training sessions available locally, and selected faculty attended national training in Baltimore. The principal attended training sessions germane to the model. For teachers who joined the faculty after these initial training opportunities, Johns Hopkins provided a one-day training session.

During the teacher focus group held during the spring of the 1996-1997 school year, two major problems in implementing Roots & Wings were discussed — a lack of funds and materials and a far-too-ambitious implementation schedule. After the faculty began a successful implementation of the reading program during 1995-1996, they attempted full implementation of the MathWings and WorldLab programs during 1996-1997. Unfortunately, the district ran into major problems in attempting to distribute the needed MathWings and WorldLab materials. As a result, teachers were forced to purchase the materials on their own. The associated costs and inconveniences, along with the stress of implementing the new Roots & Wings math, science and social studies curricula, frustrated teachers. Rather than give up, the teachers improvised until the materials began to arrive.

Teachers expressed that more input from them would have helped implementation in some areas. They felt they should have been consulted regarding which components of the program met the needs of JFK Elementary students and that introduction of components should be balanced with the current workload of teachers. They stated that by "taking on too much" the system failed. For instance, some teachers explained that new components of the program were added before the students (and teachers) were ready. As one teacher stated, "We should have done reading really well before taking on more (MathWings and WorldLab)." Another agreed, summing up, "It was too much, too soon."

At the beginning of the next school year, 1997-1998, more than half of the faculty and the school's Roots & Wings facilitator were new to the school and to the design. Several of the school's key faculty, including the facilitator, were selected by the district, Johns Hopkins, and a local university to become trainers for the growing national model. Several other faculty left or transferred. Altogether, there had been a greater than 80% change in JFK's faculty over the course of the five years since the model's adoption. Thus, the school elected to "begin again" and only implemented the reading program until the faculty became experienced and comfortable with the reading program. They became confident with the one component, and

test scores in reading indicated progress. An unusually high number of new faculty members was also hired the subsequent year (1998-1999) and delayed, once again, the implementation of the MathWings and WorldLab components.

Nevertheless, most teachers felt that student performance in reading was enhanced through implementation of the Roots & Wings model. They reported observing an overall enjoyment of reading. Grouping students by ability level allowed children to experience success and to improve self-esteem. However, teachers did, occasionally, question the inclusive design of the program. Although they supported providing special education students the opportunity to experience success in the regular classroom, teachers claimed that the rigid time constraints set forth by the program precluded the provision of instruction at ability level if a special-needs child fell behind. Resource instruction, in the teachers' view, should have been provided on a lower level, allowing special-needs students to begin on ability level rather than on grade level. Another issue expressed by a few teachers was the match between the Roots & Wings curriculum and the content found on the standardized tests that the state and district used to hold teachers and schools accountable. Reflecting the concerns of the group, one teacher stated, "I don't feel my students are ready for [the state assessment]."

Teacher Buy-in. According to Ms. Parker, the teachers at JFK Elementary had, in general, "embraced the design." During a focus group, the teachers reported a mutual sense of ownership and commitment to the model, describing the cooperative nature of most faculty members as a source of support when frustration occurred. A major reason for the generally positive reactions of teachers was the visible success experienced by their students.

The most discussed issue influencing teacher buy-in was the highly structured nature of the Roots & Wings program. Teachers' opinions were varied on this issue. The faculty stated that the structure provided security for new teachers, but that experienced teachers felt it was "too rigid," with no time for creativity or the "teachable moment." In general, the teachers seemed to think that the design was improving students' learning. Inspired by this progress and by the overall promise of the design, most teachers were willing to sacrifice some degree of professional autonomy to implement the program properly.

Professional Development/Training. According to the teachers, the initial training for the Success for All program was informative but not practical. More emphasis appeared to be placed on the 'what' than on the 'how' of Roots & Wings. Teachers felt that they would have learned more by seeing a program in operation prior to implementation. One teacher described JFK teachers as "guinea pigs." Teachers expressed the need for an updated instructional manual. Such a resource was said to be particularly important for new teachers who did not go through initial training with the other faculty. New teachers often had to rely

on other teachers experienced with the model for direction and clarification. Positive support was provided at a question-and-answer session and through the SFA toll-free phone number.

Support for change and professional development was strong at the building level. Ms. Parker encouraged her teachers to participate in all new learning experiences related to the Roots & Wings model, and had demonstrated this support with her own active participation. The educational resource specialist, principal, and experienced teachers were available to support teachers experiencing problems. Teachers were complimentary regarding the SFA facilitator, who was described as knowledgeable, supportive, and as someone who would come in to teach a class when such help was needed.

In addition to the SFA training, during the 1996-1997 school year Ms. Parker and the faculty attended an in-service on authentic assessment. Each teacher was subsequently required to submit a plan to implement one form of authentic assessment during the 1996-1997 school year. Several teachers began using portfolio assessment methods.

Resources. Teachers stated that additional materials were needed to fully implement the Roots & Wings model. These materials were not included with the Roots & Wings curricula and were not widely available at the school. Some of the items that teachers mentioned included big books for kindergarten, books for classroom libraries, books in the library for listening and comprehension activities, paper for mathematics, and phonetic materials above first-grade level. Also, because not all skills measured in the state assessment were included in the model, materials for teaching those skills were also needed.

The lack of funds and materials was viewed as the main hindrance to full implementation of the design. Specifically, teachers commented that the district office had not provided materials in a timely manner and funds were not provided for supplies. One teacher stated, "We have a Cadillac design but a Yugo budget." Their comments reflected a concern for the academic progress of the students and seemed to imply a certain inflexibility in the design.

Martin Luther King Jr. Elementary

Description of School

Martin Luther King, Jr. (MLK) Elementary is also a kindergarten-through-fifth-grade elementary school that serves a predominantly African American population. MLK has had a unique student body, with 22% classified as special education students and several students having visual impairments. Although the school was considered a neighborhood school, some of the exceptional students came in from different sections of the city. Most of the children who had been diagnosed as mildly mentally retarded were mainstreamed with the other

children. Two teachers were assigned to work with these students at a reading level appropriate for them. A tutor taught the first graders, one on one, in 20-minute segments.

SFA was implemented in kindergarten and first grade during the 1993-94 school year. During the following school year (1994-1995), Roots & Wings was added in grades two through five. WorldLab was introduced in three classes during 1996-1997 — one class in each of the third, fourth, and fifth grades.

How Roots & Wings Was Implemented

The principal, Ms. Downing, felt that she could see a continuous improvement in program implementation and staff development when compared to previous years. She perceived the progress as occurring, "step by step and stage by stage ... I couldn't see this last year and this year I am seeing it [the design] unfold." When the teachers were asked how people would know if they were in a Roots & Wings school, they laughed and responded: "Look on the walls and at what is posted." They also referenced the uninterrupted 90 minutes that was set aside for reading each morning, children's responses to the model's characteristic hand signals, and the use of the model's cooperative and team-based approaches to learning.

The Roots & Wings design also contributed to more project-based learning, as the old schedule did not often allow time for special projects. The design was credited with promoting the school's first-time participation in a science fair and with an increased use of computers. Students used computer technology in writing up their science reports, doing journal writing, constructing meaningful sentences, and conducting research that involved the use of an encyclopedia. The students frequently were given an option of using the computer independently or in small groups. Both options were seen during classroom observations.

Teachers viewed regrouping students for reading, portfolio assessment, and teamwork as ways the design impacted special-needs children and reduced their fear of failure. However, many teachers felt that the program did not address the needs of children with severe mental retardation who were described as non-verbal and "functioning at a low level." According to some teachers, the design's fast pace was not conducive to mastery learning for many special-needs students and for some regular students. Teachers also felt the Roots & Wings handbook was "totally confusing."

Teacher Buy-in. The design's progress was attributed by the principal, Ms. Downing, to a faculty that was "enthusiastic about the program." This enthusiasm came, in large part, because of the district's liberal transfer policy that allowed all teachers who were not supportive of the school's chosen reform model to choose other schools that had not selected models or were implementing other designs the teachers may have preferred. Like many

schools in the district adopting new reform models, MLK's decision to implement the full-scale Roots & Wings model was followed by some significant staff turnover. According to Ms. Downing, the school took on a large number of young teachers who "don't have to change." The veteran teachers who elected to remain at the school were willing to put aside practices that they believed were not working for the children in favor of the Roots & Wings methods.

According to Ms. Downing, since the initial implementation year, few teachers had left the school because they did not want to participate in the program. For the most part, teachers stated that they felt comfortable with the program. They referred to "enjoying teaching it," "being impressed by it," and "thinking it is a good program." The teachers believed the design improved their teaching practices and was beneficial to students' learning and their self-esteem. Therefore, similar to the situation at JFK Elementary, most teachers were willing to sacrifice some degree of professional autonomy and creativity because they were inspired by the belief that they were making a difference for their students.

Professional Development/Training. Since the 1996-1997 school year, staff development funds had been used to send two-thirds of the teachers to Baltimore for Success for All and Roots & Wings national training. Any teacher who had not previously attended the training was offered the opportunity to go during the 1997-1998 school year. Because of the high quality of their Roots & Wings implementations, two MLK teachers had been trained by Johns Hopkins University staff to train other teachers within this Southern urban district. The principal had also attended training sessions at Johns Hopkins University in addition to numerous training sessions provided by the district and state on school improvement and restructuring.

Teachers felt that using the design had improved their instruction. As one teacher said, "The design pushes you to be a better reading teacher." The teachers attributed their understanding of the program primarily to their instructional facilitator, district workshops, interactions with experienced teachers in their own school, and watching videos of teachers conducting reading lessons. They also reported that they received valuable feedback from the design consultants from Johns Hopkins University. At the time of the interview, several of the respondents were looking forward to spending a week attending Roots & Wings training in Baltimore.

Resources. Financial and personnel resources had been redirected to better accommodate the design. For example, when the education resource specialist took another position, the funding was redirected to teacher travel expenses for Roots & Wings training at Johns Hopkins University and to purchase Roots & Wings curriculum materials. To lower the student-to-teacher ratio without adding an additional teacher to the payroll, the librarian and

the guidance counselor team-taught a Roots & Wings reading class. Still, the school had difficulties in finding the money to purchase both textbooks and WorldLab kits.

Ms. Downing believed two additional staff persons were needed to fully maximize the design's potential. She expressed the desire for an assistant principal, who would be responsible for monitoring standards and the design, and for someone with expertise in computers and technology, who would provide ongoing computer training for the teachers. The instructional facilitator was currently handling both of those tasks, but Ms. Downing said, "She can only do so much." Despite these concerns, there appeared to be sufficient resources available to support successful Roots & Wings implementation.

Cross-case Analysis

Student Outcomes. Student outcomes are shown in Table 8. The attendance rate at JFK Elementary remained the same between the two time points at 93% and increased slightly from 94% to 95% at MLK. Reading and math achievement were based on the average of third through fifth grade students' achievement on the CTBS Fourth Edition in the spring of 1995 and the CTBS Fifth Edition in the spring of 1998. In the spring of 1995, the average reading scores and math scores were relatively similar at JFK and MLK. The average reading achievement was at the 23rd percentile at JFK and the 26th percentile at MLK. The average math achievement was at the 34th percentile at JFK and the 33rd percentile at MLK. While the two schools started out at relatively similar places, the greatest increases in achievement occurred at MLK, with increases of 21.33 percentile points in reading and 17.66 percentile points in math. At JFK, smaller increases of 13 percentile points in reading and 4.66 percentile points in math were found.

Table 8

Summary of Nationally Recognized Whole School Reform Schools' Enrollment, Attendance, and Achievement Outcomes by Year

	1995	1998
John F. Kennedy Elementary		
Student enrollment	474	483
Daily attendance rate	93	93
Reading Percentile (Grades 3-5)	23	36
Math Percentile (Grades 3-5)	33.67	38.33
Martin Luther King, Jr. Elementary		
Student enrollment	297	282
Daily attendance rate	94	95
Reading Percentile (Grades 3-5)	26	47.33
Math Percentile (Grades 3-5)	32.67	50.33

Instructional Outcomes. The instructional outcomes, based on our classroom observations, are reported in Table 9. A total of 19 classroom observations were conducted at JFK and 10 observations were conducted at MLK. The occurrence of authentic instruction was relatively low at each school. The mean score for the Authentic Instruction factor was -0.01 at JFK and -0.25 at MLK, placing these schools at the 49th and 40th percentiles, respectively. The average percent of students we observed that were on task was close to the study average at JFK (76%) and slightly lower than average at MLK (68%).

Teacher Outcomes. A number of teachers stated that the SFA/Roots & Wings model helped them become better teachers. The teachers also witnessed improvements in their students' learning and self-esteem. For the most part, the MLK teachers stated that they felt comfortable with the program. Some teachers reported that their creativity was compromised. However, in both schools most teachers seemed to rationalize these professional constraints as worthwhile sacrifices because of the evidence — coming from both within their school and from outside of their school — that SFA and Roots & Wings were making a difference for their students.

Table 9

Summary of Nationally Recognized Whole School Reform Schools' Authentic Instruction and Percent On Task Outcomes

	N	Percentile	M (SD)
John F. Kennedy Academy	19		
Authentic Instruction (11-item scale)		49	-0.01(0.89)
Percent of Students on Task			75.73 (15.74)
Martin L. King, Jr. Elementary	10		
Authentic Instruction (11-item scale)		40	-0.25(0.95)
Percent of Students on Task			67.71(15.01)

PARTNERSHIP WITH A LOCAL EXTERNAL PARTNER

The Context

The Curriculum Project (CP) was developed by a former teacher experienced in social science research in consultation with the president of a local foundation, which agreed to fund the initiative. CP was created out of the belief that students in this East Coast city district needed a more structured reading and writing curriculum. The developers put together two national reform models, Direct Instruction (DI) and Core Knowledge, to form the heart of the CP model. The local foundation provided funding for the CP development and implementation. This included training for all CP teachers and assistants, materials for teachers and students, a full-time coordinator in each school, and ongoing support and technical assistance from the DI group in Oregon.

In general, instruction for DI reading and DI math in CP schools was delivered by regular classroom, certified teachers who had undergone DI training. Some instruction of DI, usually in language arts, was delivered by classroom aides. Each CP school had a full-time CP coordinator and designated teachers whose roles were to be on-site grade-level "coaches" for the program. CP teachers received an intensive week-long training for DI reading and language arts instruction during the summer of 1996, before implementation began. However, the training program also included week-long school visits by DI consultants each month. In the summers of 1997 and 1998, teachers received another training in DI reading and DI mathematics. In addition, the DI development staff in Oregon continued to review data on student progress and performance and held conferences once a week with the DI coordinators in each school.

Rather than scripted lesson plans or highly specific implementation principles, Core Knowledge leaves the actual organization and process of instruction up to administrators and teachers. The CP staff, though, elected to develop specific Core Knowledge lessons for use by teachers in CP schools. These lessons were made available to schools as they were completed (for grades K-2 in 1996-97 and for grades 3-5 in 1997-98), and some schools piloted the lessons in years one and two. Full implementation of the Core lessons was not planned until year three of the implementation.

Previous Research on DI and Core Knowledge

The DI model is built upon the belief that learning can be accelerated through maximizing efficiency in the design and delivery of instruction. DI lessons are highly structured, teacher-

centered, and include careful sequencing and repetition. Teachers use scripted lessons, which require no teacher development of lesson plans. All program materials, including teacher scripts, student textbooks, and student workbooks, are published for DI by the publishing company SRA. Reading and math instruction take place in homogeneous groups. Students are grouped according to ability and are placed at the beginning of the year on the basis of their performance test. There is fluidity across groups with students shifting as necessary. A varied research base exists showing the positive effects of DI on student achievement. Adams and Englemann's (1996) review indicated that DI is effective in improving overall achievement, as well as achievement in language, reading, math, spelling, health, and science. This research also suggests that DI improves chances for later success (e.g., graduation rates, and application and acceptance to college).

Core Knowledge, developed by E.D. Hirsch, is a sequential curriculum emphasizing a planned progression of specific knowledge. Its progressive, spiraling nature allows students to build on their knowledge base from year to year. The Core Knowledge curriculum is intended to comprise 50% of a school's curriculum. Its focus is to provide all students, advantaged or disadvantaged, equal access to knowledge. According to the developers, having this common base of knowledge allows individuals to participate fully and equally in a democratic society. Although Core Knowledge specifies what should be taught, it does not specify how it should be taught. There is a growing body of research showing positive outcomes of Core Knowledge on state and locally administered tests and on specially constructed tests that measure learning of the Core Knowledge content (Datnow, Borman, & Stringfield, in press; Stringfield & McHugh, 1998).

The Case Studies

We tracked the progress of two East Coast schools implementing the Curriculum Project (CP) with the help of a local external partner. The schools were identified, in cooperation with the district, as reconstitution-eligible Title I schools having high-poverty and minority concentrations. Both schools, John Dewey Elementary and Frederick Douglass Elementary, began implementing CP during the 1996-1997 school year. The general characteristics of the schools are summarized below in Table 10.

Table 10

Characteristics of Partnership with a Local External Partner Schools
(Based on 1996/1997 data)

School	Enrollment	Free-lunch Eligibility	Racial/Ethnic Composition
John Dewey	452	90%	100% African American
Frederick Douglass	464	93%	100% African American

John Dewey Elementary

Description of School

Dewey Elementary is a kindergarten-through-fifth-grade elementary school that serves an African American student population. Prior to beginning the partnership, the staff had undertaken a type of self-study in order to receive a Challenge Grant from the district of $350,000. To qualify, the staff completed an "Evidence of Need" statement and identified areas in which the school could use the money. They identified four areas: achievement; attendance; safe and orderly environment; and parental involvement. The Challenge Grant was approved in November of 1996. During February of that same school year, Dewey Elementary was identified by the state as a "reconstitution eligible" school. According to the principal, the state's on-site review declared Dewey Elementary in academic crisis and in need of a literacy-based environment or structure. The principal, Ms. Lewis, found this very frustrating because she felt that she and her faculty had already recognized many of the school's problems through their own self-study. Due to the conflicts between the state's recommendations for improvement and those that the school staff had developed on their own, Ms. Lewis stated that they had to redo much of the work they had already done for the Challenge Grant.

At the start of the next school year, during September of 1996, Dewey Elementary began implementing the Curriculum Project (CP). Core Knowledge had been implemented at the school prior to CP by the previous principal. The idea to implement CP came at a professional conference when one of the coordinators of the CP project approached Ms. Lewis and suggested that Dewey Elementary join CP. According to Ms. Lewis, she joined CP because, "I felt that it would be a very structured program twofold — one, for the children and two, for the teachers — and the research that we found seemed to be very, very successful in various other parts of the country, and I thought this would be appropriate for this area."

During the second year of implementation of CP, there was a change in the school population. Many families relocated because two housing developments were demolished. The

resulting changes had a negative effect on implementation. The principal said, "Because we've laid the groundwork for DI for all kids who've been here two years, and then going into the third year of implementation, that's going to be a problem. The implementation of DI and then, the behavior management aspect too, it takes a while for parents and children to learn a new environment, the new rules, and the new policies and procedures."

How the Curriculum Project was Implemented

All staff received training prior to implementation. To facilitate implementation, the principal made several scheduling and organizational changes at the school. First, to help implement the Direct Instruction (DI) component of CP more effectively, Ms. Lewis changed the schedule so that everyone had lunch at the same time. This allowed time for DI to be taught twice in the morning and twice in the afternoon without taking time away from other subjects. This also made the DI cross-grade grouping easier. Second, to accommodate the CP schedule, morning class meetings and recesses were eliminated on most days. Third, students did not go to specials such as art or music. As might be expected, these changes were not popular among teachers, as they eliminated planning periods and breaks and did not allow children time to "decompress" in the morning (during class meetings) and afternoons (during recesses and specials).

While the Curriculum Project was intended to represent a balanced combination of Direct Instruction and Core Knowledge, it was clear that Core Knowledge was much less of a priority. The DI consultants came from Oregon monthly to ensure that DI was being taught correctly, but there was no such monitoring of the Core Knowledge lessons. In contrast to DI, there was no training provided for Core Knowledge implementation. Teachers said that Core Knowledge was taught from 2:00 to 3:00 every afternoon. During this time teachers used the Core Knowledge content to prepare students for the state performance assessment.

An assessment of how successful Dewey Elementary was in implementing CP depended on who was asked. According to the principal and teachers, implementation was difficult, but improving. For instance, at the time of the second interview in the spring of 1998, Ms. Lewis stated that implementation of CP was better that year because the staff members knew more and were more comfortable with the program. Ms. Lewis stated that it was hard to say if teacher support had increased for CP because of so many new teachers. She felt that teachers supported the program but that the program was also stressful and tiring for them. According to the teachers, they were implementing DI in more subjects in addition to reading and language arts, and were getting better at it. As of the second interview, DI was also being used in spelling and math. They liked DI math because of the repetition and structure, and they

liked the combination of DI and Core Knowledge because DI laid the foundation of basic skills needed for the critical thinking components of Core Knowledge.

An interview with the CP coordinator at Dewey Elementary in the spring of 1999 revealed a less positive picture of CP. According to the coordinator, there was a mixed bag at Dewey Elementary in terms of the skill with which teachers taught DI. Some teachers picked up the program very quickly; other teachers still did not have the hang of it after two or three years. The coordinator said that she had to prompt some teachers every step of the way during a DI lesson. The coordinator felt that the teachers were inexperienced and not very good at using "teacher judgment" or at "thinking on their feet." Two of the teachers with whom she worked closely were leaving. She felt very frustrated that she had invested so much of her time in them.

The principal's impression was that the CP program was having a positive impact on learning, but these impacts were not evident on the state performance assessment. Ms. Lewis felt that it would take time for her students to learn the critical thinking skills needed to excel on the state test. There was disagreement among the teachers as to the effectiveness of the CP program in preparing students for the state test. Some teachers felt that the combination of DI and Core Knowledge did prepare the students, but others felt that only the Core Knowledge component helped.

Teacher Buy-in. Before agreeing to implement CP, teachers went to inner-city schools in New Jersey to see how successful the program was there. The CP staff gave information sessions for teachers, parents, and community persons to learn about the program. The principal said that there was 100% buy-in by the teachers in May of 1996. However, our interviews with the teachers revealed very mixed feelings about the CP program. Some teachers loved the program and had nothing negative to say, but many others complained about its structure and about the nature of the support they received from the outside consultants.

There were mixed feelings about the scripted nature of CP. Some teachers enjoyed not having to write lesson plans while other teachers felt that they were not in charge of their classrooms or allowed to be creative or flexible. For instance, some teachers wanted to spend more time on skills with which students were having trouble, but they feared that if they veered off the DI script, the DI coordinator or the DI consultants would reprimand them. Said one, "Every moment of the day is planned. And you must stick to that. And you must get those things accomplished, or you will be looked upon as off-task or ineffective as a teacher." Teachers also complained that it was difficult to find the resources needed for the Core Knowledge lessons. The teachers felt the resources should be in the school's media center.

Things had improved somewhat over time with the hiring of a full-time librarian and the purchase of new Core-related books.

During the third-year interview with teachers, there was a great deal of tension. Many of the teachers felt that Ms. Lewis and the DI coordinators talked down to them and were not very supportive. Several teachers had left or were planning to leave because they did not like the climate of the school. One teacher left in the middle of the year and was never replaced and another teacher leaving was the DI coach for his grade level. According to the CP coordinator, teacher attendance also had been atrocious. The supposed initial 100% teacher buy-in prior to implementation had clearly deteriorated by the third year of the CP program.

Professional Development/Training. DI training was provided for teachers, paraprofessionals, AmeriCorps volunteers, and community members during the summer prior to implementation in 1996. The training focused on how to hold the script, how to read the script effectively, and how to do the hand signals. Ms. Lewis, the DI coordinator, and the grade-level coaches attended a more in-depth training in Oregon that same summer before the teacher training. Teachers' reactions to the training were mixed. Most thought that it covered the basics well enough, but simply knowing how to read the script was not a guarantee that teachers were equipped to deal with the reality of the classroom. "I feel almost like it's not training that I need. They need to come in, and they need to look at the children and see what's really going on. But the philosophy behind them [is] it's the teacher, and so if something is going wrong in the classroom, you need more training, and I feel like I'm over-trained in a sense."

To support the teachers, professional study days were offered each week during the first year of implementation. These study days were meant to occur throughout the school year, but few occurred because of a district mandate that study days should not be held during May or June or during the week of a holiday. During the second year of implementation, staff development meetings were held every other week after school and focused on various DI strategies. Teachers also worked with the coordinator weekly before school started from 8:20 until 8:50.

Ms. Lewis said that she got into classrooms every day to make sure that teachers were doing what they had learned, that they were on task with the children, and that the children were learning successfully. The consultants from Oregon also visited the school once a month to observe and provide feedback to teachers about their implementation of DI. Most teachers did not find the visits by the consultants from Oregon to be very helpful. One teacher said her class had been observed only twice during the year. Another teacher said that the only time she was observed was when she had her top group. As a result, teachers felt the consultants did

not understand the typical challenges the teacher encountered with her less advanced groups. The teachers did not report that their grade-level coaches were helpful either, because all teachers, including the coaches, were teaching DI at the same time and thus were not available to observe and to provide feedback.

Resources. At the time of the first interview, the principal stated that they received money from a Challenge Grant, a Change grant, and Title I. Funds from the Challenge Grant were used to hire part-time teachers to make the classes smaller for DI instruction. Although the training and materials for the CP program were funded by a local foundation, during each site visit the teachers and Ms. Lewis complained that these funds were not sufficient to hire enough personnel and to create enough space to teach the DI reading and math groups in the small-group settings the model demands. As more teachers began to leave the school, Ms. Lewis reported that it was difficult to attract experienced replacements as the budget was not sufficient to support their salaries.

Frederick Douglass Elementary

Description of School

Frederick Douglass is a kindergarten-through-fifth-grade elementary school serving a predominantly African American student population. Because of low test scores, Douglass was identified by the state as "reconstitution eligible" during the winter of 1996. The principal, Ms. Walker, said both she and the teachers were shocked by the finding. According to Ms. Walker, "The teachers were devastated because I have an extremely hard-working faculty." Ms. Walker began to look for ways to improve the school and became interested in using a reform model that was based on a challenging private-school curriculum. While Ms. Walker was looking into this reform model during the spring of 1996, the Curriculum Project (CP) was in development but had not yet incorporated Direct Instruction (DI) as a main component of the design. The early model of CP had, however, included the private-school curriculum in which Ms. Walker was interested. Because Ms. Walker expected this challenging curriculum to be a primary component of the CP model, she recommended to the Douglass School Improvement Team (SIT) that they join in the partnership.

After Ms. Walker and the SIT had agreed to participate in the Curriculum Project, the model changed. The external partner decided to include the highly scripted DI model as a prominent component of the design and replaced the private-school curriculum with the Core Knowledge curriculum. Ms. Walker had some reservations about these changes, as she felt that the evolving CP was straying farther from her personal philosophy of teaching. However, she felt that the regimented DI model, combined with the rich Core Knowledge curriculum, might

address some of the problems Douglass was having with student discipline and literacy. Ms. Walker put aside her personal views, believing that the model would help her students. The fact that Douglass Elementary would receive funding from the local foundation to implement CP also played a large role in the SIT's decision. According to Ms. Walker, "We knew we were in reconstitution. We knew we had to do something. We knew we could not afford to purchase the [private school] curriculum." The decision to implement CP was then presented to the faculty and to the parents. There was some dissension on the part of the teachers who felt that CP would restrict their creativity and would not provide adequate enrichment for students. Through professional development, teachers were slowly introduced to CP.

How the Curriculum Project was Implemented

During the first year of CP (1996-1997), DI was implemented in all of the pre-kindergarten through second-grade classrooms. It was also used for some third and fifth grade students who were not doing well with the reading program for those grades. Core Knowledge was implemented from kindergarten to second grade. The Core lessons had not yet been developed for the upper grades. According to Ms. Walker, Core Knowledge was not given as much attention as DI because the teachers were just so overwhelmed with the DI component of the CP program. According to the kindergarten teachers, at the time of our first interview, the preoccupation with DI meant that they were not teaching Core Knowledge at all.

Despite early resistance to DI, according to the lower-grade teachers, support was increasing as teachers saw that most of their children could read successfully. Parents also became involved with DI as assistants. The principal stated that discipline problems had been reduced drastically in the grades implementing DI, as evidenced by fewer referrals to the office. To reduce behavior problems the teachers were implementing a reward system. The class received a gold seal for each day that no one needed to be sent to the office or to time out. When they earned five gold seals they had a class party. The DI coordinator stated that one of the strengths of DI was that it taught the children to listen, which they were not doing well before DI.

During the second year of implementation, the following components of the CP curriculum were being implemented: Reading and Reasoning in Learning in grades K through 6; Connecting Math Concepts in grades K through 2; Spelling in grades K through 6; and Core Knowledge in grades K through 6. Ms. Walker stated that the students loved the DI program because they were learning. "Because we're meeting their needs...they're feeling successful." Ms. Walker felt that the structure of the program and the emphasis on time on task were strengths of DI. She also saw the professional development component of the program as very

beneficial. "If we can improve the delivery of instruction from the teacher, then we'll improve the academic success of the children." The teachers were largely in agreement. For instance, a group of first-grade teachers stated that their students were advancing at a faster pace than the previous year. The teachers also felt that discipline problems had decreased because of little down time for students to get into trouble.

By the third year, all components of CP were implemented at every grade level in every class (including special education). Ms. Walker said that this had been the best year for implementing Core Knowledge, but "they still needed to work on making the lessons more performance-based." Contrary to her original opinions, she felt that DI also provided some advanced-skills learning opportunities. In the lower grades, there was a primary emphasis on basic skills, but as students advanced to the higher grades, Ms. Walker felt that the lessons emphasized higher-order thinking skills. She believed that the students in the lower grades, who had experienced DI for three consecutive years, were at the same reading and writing levels as some of the fifth grade students. According to the coordinator, the lower grade teachers really seemed to like the program because they saw how it was helping the children. They saw the children being able to decode and they saw the children doing math in their heads because of the emphasis on mental math. The coordinator reported that she had seen a definite change in school climate. Students were on task and their behavior had improved. The coordinator stated that the school was becoming more self-sufficient and less dependent on direction from the Oregon consultants. As opposed to previous years, she handled situations and then called the consultants and explained what she did.

Despite these positive outcomes, there were some lingering criticisms and concerns. First, Ms. Walker criticized the CP program for its lack of emphasis on writing (as compared to the private-school curriculum they had originally considered), saying that if she could change one thing about CP it would be that schools could more easily mold it to their individual needs. Second, the coordinator raised a concern that the DI materials were not multicultural, which she found to be very inappropriate for an all-African American school. "Even though [the] stories are very good, they're informational. The kids love them. They like them. That's not a problem. But still, they need to read about and see some kids that look like them." Third, the coordinator indicated that not all children learned most effectively through DI's phonetic approach. Because teachers had to go by the script and were not allowed to try alternatives, teachers had no choice but to use a phonics approach. Strong lingering concerns about the highly prescriptive nature of the DI program implementation and the implications of this for teacher professionalism are discussed below.

Teacher Buy-in. While Ms. Walker and the School Improvement Team (SIT) joined CP prior to its full development, it is clear that no staff from Douglass had any say as to what

the final reform model would look like. In fact, Ms. Walker and the SIT bought into a model that looked very different from that which was eventually delivered. Teachers had no role in developing the reform, nor were their comments or suggestions readily accepted by the DI consulting team.

These developments, along with the "surprise introduction" of the highly structured DI model as a prominent CP component, led to some lingering problems with teacher buy-in. With the DI model, the teachers in the upper grades, especially, felt they could not be as creative as they used to be. The coordinator felt very strongly about the issue. "We went to school for four years; we had to pay tuition and all of that. With DI, they're training parents to come into the room, to just sit and read a script. When we were in school, we were taught you have to use all these little creative ideas and all that kind of stuff. With DI, it's not a lot of creativity there —you kind of feel like, well, I didn't have to go to school for four years just to sit up here and to read a script."

Ms. Walker said that the DI teachers had more absences during the school year than the upper-grade teachers because the DI teachers "were tired." She thought part of the strain on the teachers came from the treatment they received from the DI consultants from Oregon. The consultants did not have a good "bedside manner" according to Ms. Walker. There had been times when she had to tell some of the consultants to "back off" from some of her teachers and let her handle the situation. There had also been confrontations regarding the scheduling of class trips. The DI consultants were adamant that nothing could occur during DI time. As a result, the students could not go on class trips to places like the local library. This was resolved in the spring when the teachers, as a group, raised their concerns with the consultants and demanded something be done to correct the situation.

Ms. Walker indicated that DI took away from the autonomy of teachers and was very inflexible. "There are times when children need to be children and have those flex times when they can have the cultural enrichments." With the DI model, though, there were few opportunities for teachers to include such activities. Ms. Walker also commented that sometimes the teachers felt they were treated unprofessionally by the Oregon DI consultants and were talked down to. She stated that the Oregon consultants were not generally open to her suggestions either and had gotten confrontational with her on several occasions. These two factors, the relationship with the DI consultants and the highly prescriptive nature of DI, compromised teacher buy-in at the school. Nevertheless, implementation and buy-in did improve over time, as more teachers began to realize that DI was improving student discipline and learning. Also, Ms. Walker did an increasingly effective job of buffering her teachers from the DI consultants.

Professional Development/Training. To prepare for implementing CP, the principal and coaches attended a week-long local workshop and then went to Oregon for training in Direct Instruction (DI). The teachers received training during the summer prior to implementation. For the first two years of implementation, teachers received continual training in DI during weekly early-release days. Either the Oregon consultant or the DI coordinator gave the training.

According to some of the teachers, the summer training adequately prepared them to implement DI. Other teachers disagreed and criticized the training because it did not involve seeing DI being taught to an actual group of students. Instead, the teachers viewed the DI instruction on videotape, which did not prepare them for dealing with behavior problems while trying to teach DI. Two new teachers who had started at Douglass during the middle of the second year of implementation received only two days of training and did not feel it was enough.

The teachers reported that in the beginning of the first year of implementation, the people from Oregon came twice a month and stayed for a week. At the time of our visits, the Oregon consultants were coming once a month for a week. The teachers found the visits helpful because the consultants would make suggestions and demonstrate for the teachers. According to the lower grade teachers, DI had impacted the amount of communication among teachers. They said that they conferred with one another a great deal and traded advice and suggestions.

At the time of our second visit, all of the third grade teachers were new. The third grade teachers commented that they found the DI training to be artificial in that they worked with a partner and not an actual group of children. New teachers did not receive training for Core Knowledge. One teacher said, "I was told that Core Knowledge was basically an outline of different materials to use to fulfill the science, health, and social studies part of the curriculum." When asked how teachers generally felt about Core and DI, a teacher replied, "I think it's either you love it or you hate it! But I think most people accept it, let's put it that way."

During the third year of implementation, the early dismissal days were eliminated. Therefore, teachers were not receiving weekly professional development. Some professional development was offered after school but it was difficult to get teachers to stay. Even though the teachers got paid for staying, it was not enough to motivate them, according to the coordinator, because the teachers were tired by that time of the day. Teachers would stay if one of the consultants was coming and wanted to give a workshop. The coordinator said that there

had been an improvement in how their consultant worked with the teachers. The teachers still did not like it when the consultants came into their classrooms and, basically, "took over."

Resources. Frederick Douglass received Title I funding as well as funding from a few grants, including the Governor's Technology Grant. The technology grant money was being used to rewire the school for data, sound, and video telephone in every room. During the second year of CP implementation, 60 families transferred to another school due to the demolition of local housing projects. This meant that Ms. Walker had to send $60,000 back to the city. Fortunately, she was able to find other means of funding.

During the third interview in 1999, the principal stated that her Title I funds were used primarily for personnel, because DI is so staff-intensive. Title I funds had been cut extensively over the last two years of CP. Some of the Title I money was used for purchasing materials and supplies and for cultural enrichment trips for the students.

Cross-case Analysis

Student Outcomes. Student outcomes are displayed in Table 11. Enrollment decreased considerable at Dewey Elementary due to the relocation of a number of families after the demolition of two public housing developments. Attendance rates increased for the years for which we have data (1996-1997 and 1998-1999) from 94% to 97% at Dewey and remained the same at Douglass Elementary at 95%. Because there was not a district-wide testing program in place during the spring of 1997, we relied on data from an independent evaluation of CP that provided Comprehensive Test of Basic Skills, Fourth Edition (CTBS/4) achievement data for second grade students. In the fall of 1996, the Reading Comprehension and Math Concepts and Applications sub-tests were administered to the second grade students at both Dewey and Douglass. We were able to obtain second grade reading and math achievement data from district-administered testing during the spring of 1999.

A comparison of achievement at Dewey Elementary for the second grade from the fall of 1996 to the spring of 1999 shows that achievement remained about the same for reading, with an increase of one percentile point, and increased slightly (three percentile points) for math achievement. Both scores remained in the bottom quartile. A comparison of reading achievement at Douglass Elementary for the second grade from 1997 to 1999 shows a substantial increase of 19 percentile points, which raised scores from the first to second quartile. A comparison of math achievement for the second grade from 1997 to 1999 shows a smaller increase of 11 percentile points. While scores remained in the bottom quartile, they did move up from the 13th to 24th percentile.

Table 11

Summary of Local External Partner Schools' Enrollment, Attendance, and CTBS/4 Outcomes by Year

	1997	1999
John Dewey Elementary		
Student enrollment	452	338
Daily attendance rate	94	97
Reading Percentile (Grade 2)	17	18
Math Percentile (Grade 2)	10	13
Frederick Douglass Elementary		
Student enrollment	464	406
Daily attendance rate	95	95
Reading Percentile (Grade 2)	15	34
Math Percentile (Grade 2)	13	24

[a] Note: Pretest CTBS data are from the fall of the 1996-1997 school year.

Instructional Outcomes. Authentic instruction and percent on task data are reported in Table 12. A total of ten classroom observations was conducted at both Dewey and Douglass. At both schools, the occurrence of authentic instruction was very low. The mean score for the Authentic Instruction factor was -0.77 at Dewey and -0.29 at Douglass. These scores placed Dewey and Douglass at the 22nd and 38th percentiles, respectively, for authentic instruction. The average percent of students on task was low at Dewey (60%). Although higher at 68%, the percent of students on task at Douglass remained below the study-wide average of 74%.

Table 12

Summary of Local External Partner Schools' Authentic Instruction and Percent on Task Outcomes

	N	Percentile	M (SD)
John Dewey Academy	10		
Authentic Instruction (11-item scale)		22	-0.77(0.58)
Percent of Students on Task			59.88 (27.12)
Frederick Douglass Elementary	10		
Authentic Instruction (11-item scale)		38	-0.29(1.22)
Percent of Students on Task			67.67(18.21)

Teacher Outcomes. Although the CP program did have some meaningful impacts on teachers' practices, it is not clear that these changes in practices were achieved by enhancing

teachers' capacity for change. Douglass and Dewey teachers had no voice in the design or development of the CP model. Moreover, Ms. Walker and the SIT from Douglass bought into a model that looked very different from that which was eventually delivered. Both schools were "coached" by outside consultants who, as Ms. Walker from Douglass put it, did not have a good "bedside manner." With some teachers who were having trouble implementing the DI program, the consultants actually reprimanded them in front of the teachers' students and peers. The relationship between the consultants and the teachers did not promote teachers' professional growth, but it did promote stronger adherence to the DI rules and scripts. The difference between the two schools was that the principal from Douglass more effectively insulated her teachers from the consultants and stood up for them when she felt they were being "bullied." Teachers developed the capacities to be good DI instructors and were less affected by the antagonistic relationship with the outside consultants than were their peers at Dewey.

Because DI took away from the autonomy of teachers and was very inflexible, some teachers left the schools. In other cases, there were reports that the strain of implementing DI caused some absenteeism. The teachers at Douglass seemed to confer with one another a great deal about DI and traded advice and suggestions. They also began to put their resources together to purchase and collect the materials needed to teach Core Knowledge. This cooperation and collegiality was not as evident at Dewey.

CONCLUSION

In this concluding section we begin by discussing the benefits and drawbacks of each of the four models of school improvement. Next, we present student, teacher, and instructional outcomes from across the four models. Our next discussion highlights several important common factors that affected school improvement across all four of the diverse school reform models. We conclude by discussing several implications of our findings.

Potential Benefits and Drawbacks of Each Reform Model

Looking across the four models of school improvement, below we summarize the key benefits and drawbacks of each approach. We present some information that is particular to the sites and schools in our study. However, our main objective is to present the benefits and drawbacks that educators and policymakers should be aware of when considering each of the four school improvement strategies.

Grassroots Site-Based Reform. As evidenced by Sojourner Truth, a major benefit of a grassroots site-based reform effort is that the principal can tailor the program to meet the individual needs of the school. Through her vision and leadership, the principal at Sojourner Truth was able to develop an improvement program that approached learning holistically by addressing the academic and personal needs of students and their families and by forming and maintaining strong relationships with community businesses and outreach organizations as a means of addressing such needs. Effective grassroots reform also advanced democratic ideals by involving multiple actors in the school improvement process, including the principal, teachers, parents, and community members.

The key drawback of a grassroots reform effort is that such an effort is difficult to replicate at other schools. It is tailored to meet the idiosyncratic needs of a particular school and it is difficult, if not impossible, to package and transport to other schools as a replicable model. The success of grassroots site-based reform is also highly dependent on the effectiveness of the leadership at the school. If the principal or teachers do not provide a strong vision for improvement that is embraced by all, improvement efforts are unlikely to work. A related drawback is that each principal must "reinvent the wheel." As a consequence, site-based school improvement may be a more time-consuming process than implementing a replicable school reform model. Although the grassroots site-based reform model was extremely effective in one of the schools in our study, the process of improvement had taken a total of eight years.

Locally Mandated Reconstitution. According to the principal at Santiago, reconstitution led to an increase in staff cohesion and communication. This increasing collaboration and organizational agreement may have resulted from the hiring of a new staff of like-minded and committed young teachers. However, it also may simply reflect the fact that a completely new staff eventually grew to know one another and to communicate and collaborate over time. In addition to the actual act of reconstitution, the threat of reconstitution was also capable of producing these improvements. Over the three years that Harriet Tubman Elementary was on the low-performing schools list, most of the disheartened faculty left the school. Among those who remained and those who joined the school, there was an increase in staff collaboration.

In addition to the potential role of reconstitution in increasing collaboration and cohesion, there was some evidence that reconstitution had the intended effects of ridding the schools of staff who may have held prejudices and who may have been less than committed. For instance, the principal at Booker T. Washington felt that the best thing about the reconstitution process was that it caused people to "reevaluate themselves regarding the achievement of African American and Latino children of the school."

Because experienced veteran teachers were reluctant to apply for the positions in reconstituted schools, the new hires were overwhelmingly young, inexperienced teachers who occasionally lacked the proper credentials. Although this was perceived primarily as a problem, the young, energetic teachers did seem to make some positive contributions in the classroom. Our classroom observations revealed that the teachers from reconstituted schools were consistently among the highest implementers of authentic instruction principles. Most likely, the greater application of these methods was due to the young composition of the faculties from the reconstituted schools. The young teachers seemed to apply more of the ideals of contemporary models of progressive education than did their more experienced peers from the other schools in the study.

Despite these potential benefits, there were clear tensions between the new teachers and the pre-reconstitution veterans who were hired back. Also, the very children who were meant to be helped by the process felt abandoned when they returned for the new school year to an almost entirely new faculty. According to one teacher, the students felt that reconstitution was their fault. "The kids were very, very aware of the test scores and their performance and they just took that to mean 'Oh my God. It's me and I'm stupid.' "

Implementation of a Nationally Recognized Whole-School Reform Model. A drawback of using a highly prescriptive, externally developed reform is that there may not be room for teachers to express their own creativity or to focus on other topics that are not a part

of the lessons. This was a complaint in the Southern schools. Experienced teachers, especially, felt Roots & Wings was "too rigid," with no time for creativity or the "teachable moment." Also, because of the intensive training to start up the reform and the large amount of materials needed, using a national whole-school reform can be quite expensive and may be out of the reach of some schools.

But by implementing one of the research-proven, nationally recognized reform packages, schools typically know that they are using a model that has been proven effective in raising student achievement. Teachers are saved the time and labor of developing curriculum and lesson plans because most of the well articulated models provide teachers with their lessons and activities. The replicability of the reform clearly is another benefit, in that the same package may be transported to any school within any district.

In general, teachers were impressed with the Roots & Wings design and felt that it was improving students' learning. Inspired by the overall promise of the design and by the progress that their students were making, most teachers were willing to make some professional sacrifices in implementing the program. In particular, teachers were willing to sacrifice some degree of professional autonomy due to the belief that they were making a difference for their students.

Partnership With a Local External Partner. One of the benefits of a partnership with a local external partner is that much of the work of researching and coordinating the reform package is done by the external partner rather than by the school staff. Through the partnership with the Curriculum Project foundation, the East Coast schools were provided a reform package, materials, and training — all coordinated by the foundation. Also, having an external partner who is locally based may facilitate contact between the school and the external reformers. There also is the potential to tailor the reform model in ways that might not be possible through a single national reform model. The local external partner in our study combined two national reform models, Core Knowledge and Direct Instruction, to create a specialized hybrid program.

One of the drawbacks of working with a local external partner, in this case, was that the schools signed on to implement a package that was not as well researched and developed as the prominent national designs. While DI is well researched, the combination of DI and Core Knowledge is not. In addition, for one of the schools, the reform, as described at the time the school joined the partnership, was something radically different from that which was actually delivered. Inconsistencies were not necessarily limited to the outset, as other problems arose once implementation began. These problems came up primarily because the model had not been fully field-researched and was an evolving "work in progress."

The highly scripted nature of the program, combined with the heavy-handed implementation by the consultants, stifled teachers' professional lives and engagement in the school. Some teachers having difficulty with the implementation were actually reprimanded by the consultants. At Douglass Elementary, though, the principal stood up to the consultants and told them to "back off." Her strength and persistence paid off and the consultants agreed to several demands by the teachers and principal. As a result, the teachers eventually learned to be good DI instructors and did not feel as though their professional lives had been compromised.

Effects of the Four Models on Students, Instruction, and Teachers

In this section, we discuss the overall performance of each model and each school according to three standards. Two of the three standards relate to the principal goals of standards-based reform. Specifically, does the school improvement model foster improvements in students' academic outcomes and in teachers' implementation of high-quality, standards-based classroom instruction aimed at developing higher-order performances and cognitive skills? The third standard asks whether the reform model develops and improves the professional lives and capacities of teachers. Using these three standards, we discuss the contributions and limitations of each of the processes of school improvement. Finally, we identify the common factors across all four models that differentiated those schools that showed greater improvement and those schools that exhibited less improvement.

Student Achievement. The pre-post reading change scores are tabulated by reform model and by school in Table 13. The pre- and posttest scores are the means for students from third to fifth grade. For the partnership with a local partner schools, though, the pre- and post-test means are based on outcomes for second grade students only. All schools but Santiago began the study with reading scores at or below the 26th percentile (Santiago began the study with a reading score at the 41st percentile). Despite the relatively homogeneous pretest scores, there was quite a bit of variability in posttest outcomes. But reform models, except locally mandated reconstitution, showed reading achievement gains over time. The average change scores tabulated by reform model indicate that the grassroots site-based reform schools and the nationally recognized whole-school reform schools experienced the greatest achievement gains. Among the individual schools, Sojourner Truth, Martin Luther King, Jr., Frederick Douglass, and John F. Kennedy gained the most ground.

Instructional Outcomes. Table 13 also summarizes the instructional outcomes gleaned from our classroom observations. The local partner schools, which were implementing Direct Instruction, clearly showed the most limited use of authentic instruction aimed at

developing higher-order skills. All other schools exhibited modest use of these principles, posting authentic instruction percentile scores ranging from 44 to 70. Analysis of the individual items making up the authentic instruction factor revealed that few classrooms or schools consistently linked classroom instruction to students' everyday lives. Similarly, observers rarely saw children being asked by their teachers to (a) use principles or knowledge to solve novel or real-life problems; (b) use skills to create completely new products, such as designing a science experiment, writing an original composition, or deriving a mathematical rule; or (c) make value judgments against some criterion or standard, such as comparing the main ideas and qualities of two stories, or evaluating the adequacy of a science experiment to answer a particular research question.

The reconstituted schools, which had fared poorly in terms of their basic-skills test outcomes, were among the most consistent implementers of authentic instruction methods. As stated earlier, the very young faculties at the reconstituted schools seemed to embrace progressive models of instruction to a greater extent than the older and more experienced faculties at the other schools in our study. These methods, though, had not appeared to impact the schools' outcomes on the district's basic skills test. Sojourner Truth was also among the top schools in terms of authentic instruction implementation. Yet in the case of this school, the teachers had achieved strong improvements in basic skills outcomes while also using authentic instruction methods relatively frequently.

Those schools that were strong implementers of authentic instruction principles also tended to have higher percentages of students on task. The level of student on-task behavior was lowest in the local partner schools, but had improved somewhat over time, especially at Douglass. The reconstitution schools and grassroots site-based reform schools enjoyed the highest percentages of students on task.

Improvements in the Professional Lives and Capacities of Teachers. Ratings of the professional climates for teachers are tabulated by model and by school in the far right-hand column of Table 13. These ratings (high, medium, and low) represent our appraisals of the degree to which the schools and the models promoted (a) collegial relationships among staff; (b) inventiveness and active problem solving among teachers; (c) improved instructional practices; (d) formal and informal professional development opportunities; and (e) the overall professional standing of teachers. The ratings were developed based on a review of qualitative data provided by our teacher focus groups, principal interviews, and school and classroom observations.

Table 13

Student Reading Achievement Gain Scores, Instructional Outcomes, and Teacher Outcomes by Model and School

	Reading Achievement	Instructional Outcomes		Teacher Professional Climate Rating
		Authentic Instruction	Students on Task	
Grassroots Site-Based Reform	**19.5**	**54**	**75%**	**High**
Sojourner Truth	29.0	65	76%	High
Jefferson Academy	10.0	44	74%	Medium
Locally Mandated Reconstitution	**- 1.2**	**60**	**83%**	**Low**
Santiago	4.0	57	90%	Medium
Booker T. Washington	-0.7	70	82%	Low
Harriet Tubman	-7.0	55	76%	Low
Nationally Recognized Whole-School Reform	**17.2**	**46**	**73%**	**Medium**
John F. Kennedy	13.0	49	75%	Medium
Martin Luther King, Jr.	21.3	40	68%	Medium
Partnership with a Local Partner	**10.0**	**30**	**64%**	**Low**
Frederick Douglass	19.0	39	68%	Medium
John Dewey	1.0	22	60%	Low

Note: Reading achievement reported as gains in percentiles and authentic instruction scores reported as percentile scores.

The greatest support for teachers' growth as professionals was provided through the grassroots site-based reform model. Although the results were somewhat different at Sojourner Truth and Jefferson Academy, the grassroots site-based reform model, in general, tended to rely most heavily on teachers to be the primary developers and implementers of effective practices. Given these demands, teachers tended to work most effectively when they were provided greater decision-making and development opportunities. With the nationally recognized reform model, an external group, rather than teachers, did the primary development work. Teachers, though, were relied upon to implement the program after engaging in a series of professional development and training programs. Although teachers felt that the externally developed program limited their creativity to some extent, some also expressed that the experience of implementing the program pushed them to become better teachers. Teachers also stated that they were generally impressed by the program and were willing to sacrifice some

degree of professional autonomy due to the belief that they were making a difference for their students.

Although the young teachers at the reconstitution schools tended to implement authentic instruction principles with greater frequency than their peers from other schools, the reconstitution schools were not good environments generally for advancing the overall professional standing of teachers. The upheaval of reconstitution had caused tensions between pre- and post-reconstitution teachers and had stripped the schools of valuable professional experience. The inexperienced staffs desperately needed professional training and mentoring, but this support was uneven across the three schools. The professional climates of all three reconstitution schools were improving over time, but the healing from reconstitution and the development of the new inexperienced staffs were clearly multi-year processes.

Intuitively, the local partnership schools would seem to offer the most in terms of a positive professional climate. Ideally, the teachers might interact with the external partner in a mutually beneficial professional relationship culminating in the co-creation of an ambitious new reform design. The actual implementation of the Curriculum Project, though, did not at all resemble this ideal. The highly prescriptive Direct Instruction model was imposed on the teachers from these two schools. When teachers did not implement the program exactly as the external Direct Instruction consultants dictated, the teachers were literally reprimanded. At Frederick Douglass, the school's strong principal was able to confront the consultants and to smooth the relationship somewhat. Teachers at Douglass did learn how to implement the Direct Instruction program effectively and, as a result, the schools' discipline and basic skills achievement improved over time.

Common Factors Affecting School Improvement

None of the four school improvement models may be characterized as a complete success or a compete failure. Within each model, at least one of the two or three schools showed some positive outcomes over the course of the study. In this section, we identify the common factors that distinguished the successful schools from the less successful schools within each site. While the schools differed in some important ways across the various models and sites, we found five characteristics that consistently differentiated the more successful schools from the less successful schools, and that consistently shaped school improvement across the four diverse school improvement models:

1. How the reform model was implemented;
2. Teachers' beliefs, both before and during implementation, that the reform would make a difference for their students;

3. Fiscal resources;
4. Community outreach and support; and
5. Use of a nationally proven school reform model.

How the Reform Model Was Implemented. One of the most important factors that impacted the success of the different reform models was the degree to which the reform implementation was imposed upon the school faculty. When there was a shared vision among the staff, and the teachers were active participants in deciding on the reform, the reform model was implemented successfully and improvements were made. When the reform was imposed upon the school by the district or by the principal, improvements were not as readily seen.

Shared vision and teacher buy-in were strongest at Sojourner Truth (grassroots reform), Santiago (reconstitution), John F. Kennedy (nationally proven reform model), and Martin Luther King, Jr. (nationally proven reform model), although the method of achieving shared vision and teacher buy-in differed by school. At Sojourner Truth, the principal ensured buy-in among her staff by hiring talented teachers whose views of educating low-income students were aligned with her own philosophy. She then allowed teachers considerable autonomy in instructing their students as they saw fit, but also provided encouragement, support, and professional development to assist them.

As at Sojourner Truth, the principal of the other grassroots reform school, Thomas Jefferson Academy, had a strong vision. However, she imposed that vision by telling teachers that they would be using the Reciprocal Teaching model and by developing a specific script for teachers to follow. There was no discussion or vote. Based on our interviews with teachers, not all of them liked Reciprocal Teaching. Few understood the rationale for implementing it and few saw it as being a highly effective model for helping their students learn. As one teacher said, "Some of the things we did last year — that were good last year — this year are no longer good. We're doing it completely wrong. So a lot of teachers are experiencing frustration because last year they were told 'This is good. Keep doing what you are doing,' and this year they are saying, 'No, no, no, it's all wrong. I want it done this way.' "

At Santiago, Kennedy, and Martin Luther King, Jr., buy-in and shared vision were assured through the faculty's involvement in deciding to implement Success for All (Santiago) and Roots & Wings (Kennedy and Martin Luther King, Jr.). At Kennedy and Martin Luther King, Jr., teachers who did not support the reform were offered liberal opportunities to transfer to other schools. This initial buy-in and support resulted in successful implementations. In fact, the two Southern schools became Roots & Wings demonstration sites. These outcomes are in stark contrast to the West Coast school, Booker T. Washington Elementary, where Success for All was not voted on by the staff but was imposed as part of reconstitution. As a result of the

model being imposed on the school, buy-in by the faculty and by the teacher who was responsible for coordinating the program was inconsistent at best. Teachers at Washington Elementary did not implement the model faithfully until the end of the second year, at which time the teachers were asked to vote on continuing to implement Success for All. They were told that if they agreed to use Success for All, they also agreed to implement it as prescribed. At this point, the teachers voted to teach Success for All without adaptations.

Although the teachers in the East Coast schools agreed to join the Curriculum Project, it is clear that, in at least one of the schools, the teachers agreed to implement a model that was dramatically different from that which was eventually delivered and implemented. In a sense, therefore, DI was imposed upon the teachers at Frederick Douglass Elementary. With the imposition of Direct Instruction came drastic instructional changes that were, for the most part, foreign to teachers. Although external consultants 'policed' the implementation of the program, initial teacher buy-in and acceptance of the DI model were poor at the two East Coast schools. Eventually, the strong principal from Frederick Douglass was able to shape the reform implementation into a process more helpful for her teachers.

For the models of school improvement discussed above, there was, at least, the potential for teacher buy-in. However, by its very nature, reconstitution is an externally imposed reform that provides teachers no choice in the matter. Reconstitution produces change by labeling schools as failures, ridding them of their faculties, and hiring new groups of teachers in their place. Teachers in the West Coast schools expressed that there was a stigma associated with teaching at a reconstituted school, which made it difficult for principals to hire experienced staff. During the first few years of reconstitution, many of the teachers in the West Coast schools were not fully certified and had only emergency credentials.

Teachers' Beliefs That the Reform Would Make a Difference for Their Students. Intrinsic or 'psychic' rewards have been said to be key motivating factors for teachers (Lortie, 1975). Intrinsic rewards are defined by Lortie as subjective valuations associated with the work task. For teachers, rewards are tied to the perception that they have 'reached' their students — that their efforts have resulted in student improvements. According to Lortie, the amount of effort a teacher will make is related to the degree to which the teacher perceives that effort will make a difference. Our results revealed a similar relationship, in that the more convinced the teachers were, both before and during implementation, that the changes proposed at their school would make a difference for their students, the more likely they were to work hard to make the changes. Contrary to Lortie's contentions, though, these valuations were not strictly subjective. In some circumstances, teachers relied on empirical data, provided primarily in the form of students' test scores. In other cases, teachers were convinced of the efficacy of

externally developed models of instruction based on the overall quality of the design's previous research and development.

The strength of intrinsic rewards can be seen especially in the Southern schools. The highly specific national reform model they chose to implement somewhat restricted teachers' professional freedom and flexibility. Although some teachers felt Roots & Wings was "too rigid," with no time for creativity or the "teachable moment," they also thought that the design was improving students' learning. Teachers also noted that they were impressed by the model and by its proven track record. Inspired by their students' progress and by the overall promise of the design, most teachers were willing to make some professional sacrifices in implementing the program. Most notably, teachers were willing to sacrifice some degree of professional autonomy due to the belief that they were making a difference for their students.

To a lesser extent, a similar phenomenon occurred at one of the East Coast schools implementing the Curriculum Project — Frederick Douglass Elementary. The principal indicated that the Direct Instruction model restricted the autonomy of teachers and was very inflexible. In addition, she commented that sometimes the teachers felt they were treated unprofessionally by the consultants who were helping to implement the Direct Instruction program. These two factors compromised initial teacher buy-in at the school. Nevertheless, implementation and buy-in did improve over time, as more teachers began to realize that Direct Instruction was improving student discipline and learning.

On the other hand, the principal from one of the grassroots reform schools, Jefferson Academy, was not able to convince teachers that the instructional model she was advocating, Reciprocal Teaching, was any better than the models teachers had been using on their own. A lack of subjective or empirical evidence that Reciprocal Teaching was actually making a difference compromised teachers' commitment to the model.

Fiscal Resources. A common theme at every school was the role that adequate financial resources played in the successful implementation of reform. In the West Coast schools, the supplemental funding that came with reconstitution varied considerably across the three schools. This variation corresponded precisely to how successful the schools' improvement efforts were. Santiago received $376,000, whereas Harriet Tubman, placed on the reconstitution-eligible list but not reconstituted, received only $30,000. Booker T. Washington Elementary, which was reconstituted after Santiago, received an amount between that which the other two had received. There were clear disparities between Santiago, on one hand, and Harriet Tubman and Booker T. Washington, on the other, in terms of capital improvements and the availability of materials.

In both East Coast schools, the principals stated that they could not have afforded to implement the Curriculum Project without start-up funding from a local foundation. The expense of training and consultants alone would have been too costly. Furthermore, to successfully implement Direct Instruction, a considerably larger staff of teachers and instructional aides was necessary, as well as adequate space to accommodate the Direct Instruction. Despite the funding from the local foundation, both schools had problems obtaining enough personnel and space to implement the Direct Instruction model properly. These problems were most severe at John Dewey Elementary School.

In the Midwestern schools, Sojourner Truth Elementary received funding from various sources due to active grant writing by teachers and the principal. The funding received allowed for such things as the purchase of literature, a music education program, a learning lab for teachers, and a pre-kindergarten program. Sojourner Truth also received numerous capital improvements, including the construction of an attractive new building that housed the elementary school. At Thomas Jefferson Academy, capital improvements were underway. However, these improvements clearly were not as extensive as those at Sojourner Truth. They also were well overdue and came only after the principal fought continually for them.

Both Southern schools received extra resources through the district to help with the start-up implementation of Roots & Wings. Between district support (e.g., obtaining masters of the reading materials from Success for All, and then copying them in-house and distributing them to schools), actual funding provided for professional development and training, and additional support provided through Title I and other district sources, most of the expenses associated with implementation of Roots & Wings were covered. These additional resources were substantial, especially during the first year of implementation.

Community Outreach and Support. One of the hallmarks of Sojourner Truth was the amount of community resources the principal and teachers had helped make available to the school. The social worker and interventionist had successfully involved community businesses and agencies and had linked students and their families to the resources offered by these businesses and agencies.

In addition to Sojourner Truth's links to community businesses and agencies, the staff members themselves served as important resources for parents. Both the social worker and the interventionist spoke of assisting parents who were not fluent in English with various things such as translating tax forms or accessing the health care system. Teachers commented that they were expected to have regular contact with their students' parents. Another example of involving parents was the after-school lab for teachers. Parents were invited to work with teachers and the teachers said that, through this collaboration, they had developed a greater appreciation for the skills and talents the parents brought to the school.

At Santiago, the importance of community support also was evident. The principal and staff worked hard to develop and maintain positive relationships with local businesses and church groups. As at Sojourner Truth, parents were an important focus at Santiago. The principal hired a parent coordinator to build relationships with parents and to increase parent involvement. A washer and dryer were available to parents during the school day. The only stipulation was that while the clothes were washing, parents had to volunteer in their child's class. Parents were provided a resource room with computers, which was managed by the parent coordinator who offered help with writing resumes or using the Internet. Parent education classes were held throughout the year and parents also were transported downtown to a job fair.

The Southern schools both had implemented a parent outreach component along with the Roots & Wings model. The Family Support Team, a major component of the Roots & Wings design, serves two major functions. One is to increase parents' involvement with the school and with their children's learning. The second is to provide assistance to children when health or home problems interfere with their academic performance. Although both of the Roots & Wings schools in this study had diligently implemented these efforts to improve parent involvement, the initiatives had not yet had strong impacts like those noted at Santiago and Sojourner Truth.

Use of a nationally proven school reform model. At three of the schools showing strong improvement, Success for All (Santiago) or Roots & Wings (John F. Kennedy and Martin Luther King, Jr.) had been implemented. Although one lower-performing reconstituted school, Booker T. Washington, had also implemented Success for All, the model had been forced on teachers along with reconstitution. After achieving teacher buy-in through a positive faculty vote, implementation had begun to improve. Schools investing in these models generally were successful in changing the practices of their teachers and the achievements of their students.

The model worked relatively well in very different circumstances, but seemed to be especially well-suited for inexperienced teachers. The Success for All coordinator at Booker T. Washington felt that SFA was a good program for new teachers in need of structure and that it was ideal because "everything is scripted." Teachers at Smithtown held similar views stating that the structure of Roots & Wings provided security for new teachers. Implementing research-proven instructional practices also created some enthusiasm among veteran teachers. For instance, at Riverside, teachers felt that the Roots & Wings design had improved their instruction. As one teacher said, "The design pushes you to be a better reading teacher."

Implications

Looking across the three outcomes of our study — student achievement gains, classroom instruction, and teacher professional climate — the most effective school improvement models were the grassroots site-based management approach and the implementation of a nationally proven school reform model. Our data also suggest variation within models, providing evidence that a school may have some success using any one of the four models we studied. The nationally recognized school reform model, though, showed the most consistent outcomes of the four models. This result was most likely due to, among other things, the general acceptance of the model by teachers, the highly specified nature of the model, and the relatively uniform implementations that resulted. Recognizing both the consistency and overall strength of the outcomes, the nationally recognized school reform model showed the most promising results of the four models of school improvement.

The implications of this study, though, clearly go beyond this simple summative conclusion. Several common factors distinguished successful schools from less successful schools across all models of school improvement. Most notably, in enacting any reform designed to influence the classroom, administrators and policymakers must be cognizant of the fact that teachers ultimately control the reform's destiny. Without the initial "buy-in" and commitment of teachers, change is far less likely to be successful. Although administrators and policymakers may have good reasons to believe that instructional change is in their best interest, teachers also must be convinced that the hard work of reform will reward them (Fullan, 1982). One of the most important rewards cited by teachers is the subjective feeling that they have made a difference for the students they teach (Lortie, 1975). Both before and during implementation, our results suggest that teachers' commitment can be won by providing solid objective evidence that the reform, if implemented well, will make a difference for their students. The most successful schools not only improve student achievement — they positively affect student's health and welfare, the well-being of their families, and their community environments. Finally, successful schools are provided with sufficient resources to implement reforms and to provide quality learning environments. More than any single school improvement model, the combination of these factors was most consistently related to improved student and teacher outcomes.

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Appendix

Authentic Instruction Classroom Observation Form

Please base your ratings on observations of one complete lesson, or on at least 45 minutes of instruction. Complete the form immediately following the observation period. If the teacher offers instruction in more than one subject area, indicate the name of each subject area (e.g., reading, writing, math, science), and rate each subject-specific lesson independently in the spaces provided.

City/State_____

School name_____

Teacher's name_____

Classroom #_____ **Grade**_____

Date_____

Observer's name_____

Subject A:_____ **Subject B**:_____ **Subject C**:_____

I. Objectives Emphasized in Classroom

Instructions: Rate the classroom on the degree of emphasis the teacher placed on having students learn the following objectives. Emphasis here does not necessarily refer to the frequency or rate that students were engaged in related tasks. Rate level of emphasis based on the priority or value the teacher placed on developing students' skills within each area. Ask the question to yourself, "How central was this objective to the substance of the lesson?" If you observed instruction in more than one subject area, enter independent ratings for each subject.

Level of Emphasis:

0 = None; 1 = Low emphasis; 2 = Moderate emphasis; 3 = High emphasis

Objectives	Subject:	A	B	C
1. Knowledge				
(e.g., recalling information or memorizing facts or principles)				
	Level of emphasis =	_____	_____	_____
2. Comprehension				
(e.g., interpreting or showing understandings of facts, such as interpreting the meaning of a graph, inferring the principle underlying a science experiment, or predicting what might happen next in a story)				
	Level of emphasis =	_____	_____	_____
3. Application				
(e.g., using principles or knowledge to solve novel or real-life problems, such as applying knowledge of the relationship between temperature and pressure to understand why a balloon is larger on a hot day than on a cold day, or using a story about friendship to help students understand their own relationships with others)				
	Level of emphasis =	_____	_____	_____

4. Analysis

(e.g., *breaking down* complex information or ideas to understand how the parts are related or organized, such as identifying the main idea expressed by a short story, or understanding how)

Level of emphasis = _____ _____ _____

5. Synthesis

(e.g., using skills to create completely new products, such as designing a science experiment, writing an original composition, or deriving a mathematical rule)

Level of emphasis = _____ _____ _____

6. Evaluation

(e.g., making value judgments against some criterion or standard, such as comparing the main ideas and qualities of two stories, or evaluating the adequacy of science experiment to answer a particular research question)

Level of emphasis = _____ _____ _____

II. Authentic Instruction Principles

Instructions: For each of the five dimensions below, indicate the rating that most accurately describes the observed lesson. If you observed instruction in more than one subject area, enter an independent rating for each subject.

Coherence of Material

Ratings: Subject A _____ Subject B _____ Subject C _____

0 = Material is presented in superficial fragments with very little connection between parts.

1 = Some over-arching concepts or ideas are covered, but they are not well connected to the whole lesson content.

2 = Some over-arching concepts or ideas are covered in moderate depth. There are periods of sustained focus on these significant topics that are key to the whole lesson content. Coverage is uneven though; other key concepts or ideas are superficially covered.

3 = Key concepts/ideas are covered in depth. The lesson content is presented as a whole, and is structured in a way that allows for the sequencing and structuring of a complex topic. Each topic appears to build on another in an effort to foster deeper student understanding.

Connection to Students' Out-of-School Experiences

Ratings: Subject A _____ Subject B _____ Subject C _____

0 = Lesson topic and activities have no clear connections to out-of-school-experiences (e.g., students read a story about dolphins and teacher doesn't ask how many have seen them at an aquarium or zoo).

1 = Students encounter a sub-topic of the lesson and the teacher tries to connect it to students' experiences (e.g., the topic of "beach" is encountered and teacher says, "how many of you have been to a beach..."). The purpose of activating prior knowledge is to aid in describing the topic or making concrete something abstract.

2 = Students study a topic or issue that is directly connected to their experiences. For instance, they may read a story about their ancestry, someone raised in their neighborhood, or about a topic with which they identify. Students do not, however, explore these connections in ways that create personal meaning or significance for their lives.

3 = Students see the connection between lesson material and their lives. The lesson allows them to enhance their understanding of their cultural and self values, and their aspirations. For instance, students may read a story about

their ancestors and the teacher is successful at showing the students how some of their own values are connected to their ancestors. Students may read a story about the city in which they live and relate it to their own experiences.

3. Substantive Conversation

Ratings: Subject A _____ Subject B _____ Subject C _____

0 = There is no probing of student responses and no discussion of the lesson material

1 = Teacher occasionally probes a response. Students are not solicited by the teacher for their opinions, but they're not discouraged from providing them either.

2 = Students are encouraged to state their ideas/opinions, but there is little conversation occurring among students -- most dialogue is directed through the teacher. The lesson is not completely scripted by teacher or lesson material. Teacher tends to probe answers.

3 = Students are encouraged to converse among themselves about the lesson material. The teacher may or may not engage in the conversations. There is evidence that the purpose of sharing ideas is to arrive at a deeper understanding.

4. Social Support

Ratings: Subject A _____ Subject B _____ Subject C _____

0 = The rapport between teacher and students is not good. The working relationship between teacher and students is rarely constructive. Many students do not appear to like the setting.

1 = Support is mixed. Teacher praises students occasionally. At other times student effort goes unnoticed. Students are not encouraged to support one another.

2 = Support is usually positive. Teacher-student rapport is good. There is some evidence of high expectations for learning and trying hard. Teacher focuses on student successes and does not dwell on failures.

3 = A strong friendship and mutual trust develops between teacher and students. The atmosphere clearly supports student effort. Lowest achieving students receive support from all.

5. Student Engagement

Ratings: Subject A _____ Subject B _____ Subject C _____

0 = Most students appear to be inattentive. They may look as though they are bored are preoccupied with thoughts unrelated to the task at hand. One or a few students may be disruptive.

1 = Most students appear to be occasionally on-task. For those that are on-task, however, they seem to be rather lethargic and/or not trying very hard.

2 = Most students for most of the time are on-task pursuing the substance of the lesson. Students have, however, occasional lapses in concentration. A few students are only occasionally off-task.

3 = All but one or two student(s) are deeply engaged in the lesson (paying attention, clearly interested in learning the material, concentrating) for all but a few short instances of the lesson.

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